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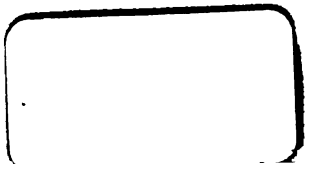

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THE

SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF

Medicine and Surgery,

J. S. B. ALLEYNE, M. D.,
PROFESSOR OF MATERIA MEDICA IN THE ST. LOUIS MEDICAL COLLEGE,

O. F. POTTER, M. D.,
PROFESSOR OF MATERIA MEDICA IN THE ST. LOUIS COLLEGE OF PHARMACY.

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J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

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GLYCERIN.

BY ENNO SANDER, PH. D.

[Communicated for the St. Louis Medical Reporter].

The great importance which has been attained by *glyceria*, from its therapeutical and technical applications, may render it agreeable to your readers to obtain a summary of all that is most interesting about it.

If fixed fatty bodies be treated with alkaline solutions, alkaline earths or some metallic oxides, at a high temperature, and in presence of water, they are decomposed, and their acid combines with the alkaline or metalic base forming a salt, called *soap*, while their base dissolves in, and unites with, a part of the water, from which it may be obtained by evaporation, as a peculiar sweet and neutral substance called *glycerin*.

Scheele, a Swedish chemist, observed it first in 1779, when he examined the water which had been used in the preparation of lead plaster; he called the sweet neutral body, resulting from the evaporation of the water, *Oilsweet*. Afterwards, in 1823, it was found by Chevreul, to whom we are indebted for the first scientific researches on fixed oils and fats, to be a constant product of saponification. Farther researches on the composition

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of fatty bodies have constituted the chemical character of glycerin, and have confirmed the supposition of Chevreul, that it is a body analogous to alcohol, bearing the same relation to the fatty substances as alcohol does to the ethers, with the difference, that in glycerin—C_6 H_5 O_3 + 3H O—three or less atoms of water may be replaced by as many atoms acid-radical, and thus form a variety of bodies, while alcohol is capable of but one combination.

Glycerin is "a colorless, inodorous, syrupy liquid, of a sweet taste, and having the specific gravity 1.25. It is soluble in water and in alcohol, but not in ether. Exposed to a full red heat, it takes fire and burns with a blue flame. It is destroyed by distillation in contact with air; but may be distilled unchanged by steam. It combines with potassa and baryta, and also with sulphuric acid. When diluted with water, it affords red precipitate, with hydro-sulphate of ammonia or ferrocyanide of potassium."

The *Pharmacopœa* gives an excellent definition, to which may be added that anhydrous glycerin has a specific gravity of 1.28, and that it is not only a solvent for almost all soluble salts, but also prevents solution of metallic salts from being precipitated by alkalies; the distillation, in contact with air at a high temperature, produces *acrolein*, a body of a very disagreeable smell.

According to the researches of Pasteur, on the process of alcoholic fermentations, glycerin occurs in it as a constant product; in the distillation of whiskey it remains in the swill, but it forms a component of wine and beer, on account of which Redtenbacher proposes an addition of glycerin to wines which are deficient in body, and asserts that, at the same time, propionic and butyric-acetic acids will be formed, which produce, with the alcohol of the wine, a very fine aromatic ether, and thus increase its flavor. Gobley has discovered it in the brain substance and in the yolk of a chicken egg.

There are also a few vegetable oils which contain glycerin in a free state, though it may have been produced by their slow

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decomposition in contact with air; from them it may be extracted by repeated washings with hot water. Its occurrence, however, is mainly and usually in combination with fatty acids and their vegetable and animal oils; and fats will furnish the best material for its production.

The manner of obtaining and preparing the glycerin differs with the method which has been used to decompose the oils or fats. If it should be recovered from the water coming from the preparation of lead plaster, the liquor is to be treated with sulphuretted hydrogen in order to precipitate the oxide of lead which may have been dissolved during the process as black sulphuret of lead, and after filtration evaporated at a low temperature or in vacuo to the proper consistence. The condensation in vacuo should always be preferred, for it not only prevents, by the exclusion of air, the decomposition of the glycerin and the consequent disagreeable odor of acrolein, produced by high temperature, but it also avoids discoloration.

Glycerin is an accidental product of the manufactory of soap and candles; it remains in the salty liquor which results from the saponification of oils and fats by alkalies, and in the watery solution which constitutes the refuse produced by the action of slaked caustic lime upon fatty bodies; from both liquors crude glycerin is obtained by evaporation, and various processes have been proposed and adopted for its purification, differing, one from the other, mainly on account of the different substances which have to be eliminated.

The most interesting and simplest process, however, is the decomposition of fatty substances by overheated steam under pressure. Tilghmann, of Philadelphia, had the first apparatus patented, which was improved by Wilson, the present manager of Price's Candle Factory, in London. The palm oil, the material which is principally used in this process, is subjected, in a distilling apparatus of a peculiar construction, to the uniform and continuous action of steam, at a temperature of about 540° Fahrenheit, in consequence of which the oil becomes decomposed

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into its fatty acid and glycerin, which distill over, and are obtained in separate layers in the receiver. As the crude products do not contain any chemicals or other bodies which do not naturally belong to the palm oil, no other processes, but another distillation, and afterwards condensation, are necessary for the purification of the glycerin.

Rochleder obtained glycerin from castor oil, by treating its alcoholic solution with hydrochloric acid gas, evaporating the resulting acid solution until all hydrochloric acid is expelled, and extracting from the resulting yellow mass the ethers formed with the fatty acids by exhaustion with ethers which, on separation, leaves pure glycerin.

It is also possible (Wurtz) to produce glycerin without the aid of fatty substances by the action of chemicals. When "tribromide of allyl is submitted to the action of acetate of silver, a new acetate is formed, which, when boiled with potassa, furnishes glycerin."

$$\underbrace{C_6H_5O_3 3C_4H_3O_3}_{\text{New Acetate.}} + 3(KOHO) = \underbrace{C_6H_5O_3 3HO}_{\text{Glycerin.}} + \underbrace{3KOC_4H_3O_3}_{\text{Acetate of Potassa.}}$$

By the action of chemicals upon glycerin, decomposition ensues and a variety of bodies is produced Its diluted solution, mixed with ferment and kept at 90° Fahrenheit, produces propionic, formic and acetic acids, while chalk and caveïn form with it, at 100° Fahrenheit, alcohol and butyric acid. Concentrated nitric acid converts glycerin into glyceric, and dilute nitric acid into oxalic acid. The formation of nitroglycerin, or glonoin, by the combined action of nitric and sulphuric acids upon glycerin, with its remarkable medicinal qualities, and stupendous explosive power, has been spoken of in a previous number of the *Reporter*. Concentrated sulphuric and anhydrous phosphoric acids, convert it into sulpho-glyceric, and phosphor-glyceric acids, whose compounds correspond to those of the ethyl, sulphuric and phosphoric acids.

Very interesting studies have been made by Barthelot, in regard to the combinations of glycerin with the fatty and other

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organic acids. It forms, with them, three distinct series of compounds, which have been distinguished by Barthelot according to the number of equivalents of water which were replaced by the acid in the new compound; thus he calls the compounds of stearic acid with glycerin, monostearin, bistearin and tristearin, which artificial bodies are perfectly analogous to the natural neutral fats.

Other interesting decompositions take place by the action of the compounds of phosphorus with chlorine, bromine and iodine upon glycerin; but it would exceed the limits of this compilation to go into details in regard to these bodies; it may suffice to mention that in the series of iodine the essential oils of mustard and garlic may be produced.

Its peculiar and remarkable qualities have already secured to glycerin numerous and extensive applications, which become constantly more manifold. Its ready solubility in water, alcohol and acetic acid, its great dissolving powers for all salts soluble in water, its beneficial action upon all animal tissues, its peculiarity to have the appearance of oil, without ever becoming rancid, render it of eminent value in medicine and surgery, where it is used already to a great extent. There were consumed 2,870,000 pounds of glycerin during the year 1861, in the Central Drug store of the Parisian Hospitals. Combining the properties of oil and water, it is frequently used in place of ointments and salves, where the external application of alkaloids, soluble salts or vegetable matter is desired. It softens and dissolves all hardened fatty substances, and has been used beneficially in diseases of the ear.

On account of its softening and soothing influence upon the skin, it is peculiarly adapted to the manufacture of fine toilet soaps. It also constitutes the menstruum of pomatums, hair oils, and such preparations for the hair, which are recommended as hair tonics and hair restorers. It removes dandruff, and heals the skin completely of this disease; it imparts to the hair brilliancy, gloss and softness, and keeps the scalp in an excellent

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condition. Being inodorous, not liable to become rancid, but, like oil, capable of extracting odors, it may be employed advantageously to extract such odors, the delicacy of which would be destroyed by distillation.

As it preserves its liquidity even in very low temperature, does never assume a cystalline form, nor may be spoiled by rancidity, it has been used as lubricator for such clocks and instruments which have been exposed to the influence of the temperature; on this account it has been largely employed in gasometers. For the same reason it is used successfully for the preservation of microscopic objects, which remain fresh, and admit continuous observation.

Food, and other substances of such character as may become spoiled by the loss of water essential to them, have been preserved by immersion into glycerin, and meat, fish, fruit, etc., are reported not to have lost any of their original flavor and qualities after the glycerin had been removed by washing and soaking in water.

Capable of dissolving a number of dye stuffs, it is not only used in the manufactory of textiles, but also as coloring for liquors, which improve by its addition in richness and taste.

Glycerin should be pure for employment in medicine and for all the more subtle technical applications. For common use it may be more or less impure, according to the object it is desired for. Its definition and its deportment toward some solvents have been stated above; it remains yet to mention the reagents by which some of the most common impurities may be discovered. If alcohol, containing one per cent. sulphuric acid, form a precipitate or only a white turbidity with glycerin, the presence of lime is indicated, and if the diluted solution of potassa produces a brown tint on boiling, some foreign organic substance, as, for instance, glucose, will be the cause of it.

It is said to be frequently adulterated with sugar syrup, which may always be discovered by an examination with polarised light. Glycerin has no optical rotary power, while all kinds of

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sugar turn the plane of polarisation either to the right or left. Cane sugar may also be detected by chloroform, which dissolves glycerin, and leaves the sugar undissolved; and glucose, by boiling the suspected article with an alkaline solution of sulphate or tartrate of copper, which will precipitate from the bright, blue liquid the red suboxide of copper in case of an adulteration.

OPHTHALMIA OF NEW-BORN INFANTS.

By O. F. Potter, M. D.

[Communicated for The St. Louis Medical Reporter.]

It is not proposed in the present paper to offer much that is new or original, but rather to call the attention of physicians to this important and often terrible disease, which, if not the most frequent, is still one of the most destructive to the future welfare of the little patient. Fortunately, however, it is generally amenable to treatment when taken early in its development and promptly treated.

Purulent Ophthalmia of infants occurs sometimes immediately after birth, but more frequently at from the third to the fifth day afterward, and occasionally appearing at a more advanced age. At the first indications of the disease the eye-lids appear to be glued together, especially in the morning, attended with some redness and swelling, making the lid puff out round and full. On raising the eye-lid the conjunctiva is found of a red and slightly thickened appearance. As the disease advances the swelling of the eye-lids increases and the child becomes restless, fretting and crying, and showing the greatest intolerance to the light, keeping its eyes constantly closed. When the lids are opened a whiteish sero-muculent matter is observed, and the palpebral conjunctiva, when the lids are raised or everted, are red and velvety and appear highly inflamed.

The secretion of matter is now very copious and bursts forth from time to time, and on opening the eyes the matter flows out

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abundantly. The discharge varys from a whiteish to a yellowish grey color, and increases somewhat in consistency as the disease progresses in intensity. In the morning the eye lids are found tightly glued together, and opened only by soaking with warm water, or a little of the mother's milk which readily softens the exuded matter.

When first opened there will be a free discharge of matter, and on further examination, will generally be found a layer of tolerably thick tenacious secretion, which can only be reached and thoroughly removed by injecting warm water with a small syringe or letting it fall into the open eye from a sponge. The cornea soon becomes implicated, and if the inflammation is not soon checked, will become more or less opake, a portion sometimes separating entirely from the iris, penetrating through the aperture presenting an irregular and dirty looking prominence. In some extreme cases, all the humors of the eye are discharged through the ulcerated cornea, and the globe shrinks to less than half its natural size.

If, however, the disease is taken in time and confined to the lids, this misfortune is prevented, and while it may be obstinate and difficult to treat, will not result in any serious or permanent injury to the little patient.

The constitutional disturbances of the system are generally manifested by fretfulness, hot feverish skin, refusing to nurse, want of appetite, bowels constipated, and general febrile disturbances.

As regards the causes of this disease, I think it may arise from some acrid secretion in the vagina of the mother, affected by chronic leucorrhœa or some other morbid condition resulting from vaginal inflammation, or among the lower classes gonorrhœal complications or the filthy conditition of the person producing a discharge, which coming in contact with the eyes of the child during its passage from the womb to external life, might be the inciting cause of this inflammatory action, still I do not consider, with some, these the only causes; and although the matter from the infant's eye applied to the adult, provokes

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a purulent ophthalmia, and the peculiar time of its occurence would point almost directly to such a cause, yet I am confident that harsh treatment in, or insufficient care while washing, want of cleanliness and proper care on the part of the nurse, and sudden and undue exposure to light, especially a glowing fire or lamp, all tend to promote this disease, which becomes virulent from the intense inflammatory action which always supervenes in the delicate tissues involved. I should say also that some constitutions are more predisposed or susceptible to such inflammatory actions than others, where, as for instance, a strumous diathesis exists, with extreme debility and unfavorable surrounding circumstances.

As for treatment, we should, when we have reason to suspect any complications of this kind, be careful to inspect the eyes minutely and frequently, and on the appearance of the least unnatural redness or irritation, they should be carefully cleansed with warm water and a gentle astringent applied, such as a weak alum water, say two to four grs. to the ounce. By this early attention many times the disease may be prevented from becoming serious or troublesome. But when once it has set in, and the inflammation which develops rapidly, has resulted in the purulent discharge, then no time must be lost in resorting to active treatment. The eyes must be thoroughly, yet carefully washed with warm water. The lids should be fomented so as to soften the matter which has collected on and matted together the ciliæ, and the lids then gently drawn asunder and the discharge washed away, some resort to the use of a small syringe to inject the water, so as to remove the more tenacious part of the matter. I have found a very good way to be, to take a soft sponge or linen rag dipped in milk warm water, and after gently opening the lids let a small stream of water pressed from it fall from a little height into the palpebral opening. This is not only convenient in the application, but most effectual in removing the disharge and cleansing the eye. This should be done every two or four hours, as the case requires, and after each washing there should be applied some astringent solution, as the

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alum water above mentioned, or a weak solution of acetate of lead or zinc, the latter of which I much prefer. Once or twice a day a few drops of a solution of nitrate of silver, say two grs. to the ounce of water with one half a grain of morphia, should be droped into the eye, the frequency of which should depend on the severity of the case. I prefer the nitrate of silver to almost any other application in severe cases, and grade the strength of the solution to the intensity of the inflammatory action.

The astringent solution following the washing should be applied with a single fold of soft linen, so as not to be too heating, and frequently changed. The general health of the child should be especially attended to. Small doses of calomel and dovers powders, followed with castor oil to produce free evacuations, should be given at least every other day at the onset of the disease, and followed by syrup of Rhubarb. If the inflammation be very great, one or two leeches may be applied to the external angle of the eye. Some recommend that the conjunctiva of the lid be slightly scarified by running the convex edge of a small scalpel lightly across it in different directions. This is, perhaps, preferable to the leeches, as it is more readily applied and avoids the danger of too profuse hemorrhage, and the scar which sometimes results from the leech bites.

Dr. Willson, of Dublin, recommends in extreme cases, to clip the chemosis with a pair of curved scissors, so as to relieve the conjestion and also the pressure from the globe, and particularly around the cornea. In some extreme cases he uses the scissors a second and third time with good results. He also applies a solution of sulphate of atrophia to the eye, the object of which is to keep the pupil dilated, whereby the iris is prevented, to a certain extent, from prolapsing through the cornea in case of a perforating ulcer, or even if recently protruded the atrophia will retract the iris. He also thinks that the dilatation of the pupil diminishes intraocular pressure and relieves vascularity, and therefore uses it largely in all ocular inflammations.

Under this prompt and active treatment, the pain and inflam-

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mation usually begins to subside from the third to the fourth day, and at the same time the conjunctiva assumes a paler and less irritated appearance, the suppuration is less profuse and gradually the eyes return to a normal condition. Should, however, the inflammation not be checked, and unfortunately go on, then ulceration and sloughing of the cornea will take place and the eye be destroyed. In such a case the general system should be sustained in every way possible, and some gentle tonic, as syrup of barks or a weak solution of quinine, given.

The mother and nurse should in all cases be warned of the contagious nature of the disease, and directed to throw away all cloths or sponges used in washing the eyes, and to have especial care as to personal cleanliness. The child should be kept in a darkened room and of as even a temperature as possible, as much depends on the care and attention given by the nurse for the successful treatment of the disease—in fact, almost as much as in the remedies prescribed.

FEMALE DISEASES.

Read before the Mobile Medical Society, May, 1866: By F. E. Gordon, M. D., Prof. of Obstetrics, Medical College, Mobile, Alabama.

It is a pleasant thought that civilization, which has elevated woman from the mere servant to be the companion of man, has interested in the study of her sexual maladies, once thought degrading, some of the best minds of the medical profession. Witness such men as Kiwisch and Scanzoni, in Germany; Paul DuBois and Cazeau, in France; Robert Lee, Tyler Smith and Simpson, in Great Britain; and in the United State, Hodge and Meigs, of Philadelphia; Bedford, Gardner and Gaillard Thomas, of New York; Byford, of Chicago; Miller, of Louisville; and in our own city our distinguished President, whose matured judgment and skillful hand are ever ready in her behalf.

I propose to make a brief summary of my experience in some of the more common forms of uterine affections, and hope to be excused for the too frequent use of the pronoun I, which is inseparable from a narrative.

In the first place, let us take a case of acute inflammation, such as we often see in a washerwoman who subjects herself to severe

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straining in lifting heavy tubs, even during her menstrual periods, not to mention the wetting of the clothes incident to her occupation. Here we have the heat, pain and increased weight of the engorged organ, with distress in the loins and in micturition; and superadded to all these we have constitutional disturbance enough to produce fever. Now what is the most rational course to pursue in subduing the fever and inflammation? If you turn to any treatise on the subject, you will find the first direction is to bleed your patient, if she is vigorous enough to bear it; next, abstract blood from the uterus by leeches or scarification; then purge, use emollient and anodyne injections, and apply poultices. Rest in a recumbent position is indispensable under any form of treatment. This reiteration of blood-letting, as the leading remedy, is confined to no particular disease, but is common to all the phlegmasiæ and to many fevers; but, in point of fact, it is a precept "more honored in the breach than in the observance." The topical abstraction of blood but for its inconvenience, would be attended with much less danger to the patient, depleting the organ directly, with a small waste of the pabulum vitæ. But when we consider the repugnance of women to the exposure necessary for the application of leeches, the horror of the animal entertained by most females, and the pain of the bites, we can very well understand how little favor attends this procedure in private practice Besides, our country friends are entirely cut off from this form of local depletion. Scarification is also liable to many of the objections above alleged. It does not relieve the vessels so freely, and by leaving wounds to be healed invites a renewed flow of blood to the parts intended to be disgorged. That this train of reasoning is insensibly adopted by most practical men, I think is proved by the manner in which they avoid these remedies and substitute less disagreeable means. For my part, I do not see why a metritis may not be treated like an orchitis or conjunctivitis, with tartarized antimony and sulphate of magnesia in decided doses. Who cares to waste time, to say nothing of the trouble and expense, in applying leeches to the testicle, or, what is more objectionable, in the neighborhood of the eye? On this hint I have sometimes acted, and with the best results; and another remedy in orchitis, the value of which I learned from Dr. Nott, might be pressed into service in violent cases, I mean the tobacco poultice; but it would have to be used with more care on the abdomen than on the scrotum. Really, we know so little of the *modus operandi* of medicines that some of our best practitioners still are in doubt whether the advantage derived from the local abstraction of blood is anything more than the effect produced on the nerves of a part; and I have not observed any great difference in the success of country practitioners, who use cold epithems, sinapisms and poultices, and our city doctors,

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who have had the run of the hospitals of London and Paris, and come home profoundly impressed with the inestimable advantages of cups and leeches. Still there are cases where leeches prove of good service, and may be occasionally resorted to with advantage to the patient

Warm hip-baths, by their repulsive effect, are a great relief to some, and a dose of calomel, by unloading the portal circulation, is at times very beneficial Anodynes, especially morphia, are great favorites of mine in all cases of pain, irrespective of fever.

In chronic metritis you have a more decided change in the structure of the organ. There is, according to some pathologists, extravasation of blood in the intermuscular cellular tissue, besides the usual lymph deposits of inflammation. I sometimes try the careful exhibition of mercury in alterative doses, and prefer the bi-chloride, 1-16 gr. three times a day. I have tried the tr. antacrida, so much lauded by Dr. Fenner, but most persons complain of the taste of the Canada balsam and oil of sassafras. The effect is the same, being due to the mercury in it. Iodide of potassium in five gr. doses two or three times a day, in comp. syrup sarzæ, has answered well in my hands, with the addition of vaginal injections of Lujol's solution in water. I may say that I have thus succeeded, better than with any other means, in combating these troublesome cases. Warm hip-baths and medicated injections are also useful here, and are praised by Scanzoni, as liquefying the deposits preparatory to absorption.

Displacements of the uterus are a great vexation to the physician, and they are far more distressing to the patient. Anteversion does not produce as much constitutional disturbance as the opposite condition, for the neck being smaller, exerts less pressure on the rectum, and defacation is less interfered with; while the vesical tenesmus seems common to both affections, and is produced by the dragging on the vagina, independent of the increased bulk of the uterus resting on the bladder.

Retroversion interferes with the regular distribution of the blood through the womb, deranges menstruation and provokes leucorrhœa. It lessens the chances of impregnation, and if complicated with pregnancy, endangers life. It gives rise to a host of maladies, called sympathetic disturbances. It is very easy to diagnose these two affections by the finger alone, and in doubtful cases by the sound. In the great majority of them it is likewise easy to replace the organ in position, but it will remain thus only so long as the instrument is in the cavity.

What means have we, then, at our disposal to retain the uterus when replaced? If it be engorged or hypertrophied, it is well to counteract this condition by appropriate treatment. Indeed, some writers think that this is the secret of the whole matter, and that there can be no displacement without an en-

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larged womb. Dr. Hodge seems to think that, even if this view were the true view, his plan of treatment is the best—"place the uterus in splints," and it will get well—just as a broken leg. But, unfortunately, in many instances the vagina is relaxed and the ligaments elongated and flaccid. Perhaps the womb, after labor or abortion, has not undergone involution or a proper contraction, and simply lapses by its weight or falls backward. In this latter condition ergot acts well, and as it is usually accompanied by hæmorrhages, I am in the habit of giving it with iron, according to the following formula: R.—vini ergotæ, ʒii.; tinct. mur. ferri, ʒij. m. s.; teaspoonful three times a day in water. In endeavoring to increase the tonicity of the vagina and ligaments, I have used with the best effects a pill thus composed: R.—Pulv. ferri, ext. cinchonæ, ää. ʒss.; strychnia, gr. 1. m.; ft. pil. No. xxx.; one three times a day. Injections of sulphate of zinc or alum prove useful by their astringency, and should not be neglected in addition to general remedies.

With regard to the vexed question of pessaries, I may say that I have set out with strong prejudices against them, but ultimately determined to try them fairly. I soon found that in my hands none of them would hold the organ in position, except the intra-uterine of Simpson or Valleix, the latter being more easily introduced. But I found that, in spite of the assurances of these gentlemen, but few women could tolerate the instrument, and that they had to be subjected to confinement and deprived of exercise; and that, even with these cautions, there was some hæmorrhage or leucorrhœa induced by its irritating effect on the cavity of the uterus, and, after all, the discomforts attending the wearing of it for a month or two, upon its withdrawal the displacement returned. Dr. Hodge's horse-shoe, which is a modification of the elastic ring pessary, is a great favorite here. I confess that, after many trials, I have not been able to succeed with it; it either presses up too much on the bowel and impedes the passage of the fœces, or down toward the pubis, the end of each leg being an irritating point. The hard-rubber bow pessary, a new form of the closed lever, is the fashion at present, but is liable to the same objections. The yielding nature of the elastic ring allows the unloading of the bowels, and yet distends the vagina enough to push up the uterus. I have, however, seen it embedded in the vagina, granulations having entirely closed over one-half of the circle. The name of pessaries is legion, and each has its advocates and its advantages—the soft sponge and air cushion, in irritable conditions; the globe, for anteversion; the pessary of Dr. Heard, which came near amputating the neck of the uterus for one of my patients, but which I find figured by Moreau in his atlas, looks as plausible as any other. There are also pessaries like Schilling's, for dilating the posterior wall, and

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some attached to an abdominal supporter, a good way of support in extreme prolapse. This latter instrument, after having been tabooed by the profession for many years, seems to be gaining ground once more, and is favorably mentioned in the two most recent works on Gynecology that I have seen. It was one of the few jokes ever told of Professor Hodge, that he had dubbed it before his class "the abominable supporter." The pressure of a pad over the pubis takes off the weight (super-incumbent) of the abdominal viscera, and, by fixing the uterus, prevents the pain of jolting it. It ought to be more useful in anteversion than in retroversion, as the pressure reaches more readily the front. I have used lately an improvement on the bow pessary, which has the power of elongating or shortening itself, to suit the changes of position. It is very ingenious, and I think, from a trial of it in several difficult cases, worthy of attention.

I think I have derived benefit from swabbing out the cavity of the uterus with perchloride of iron. By winding a dossil of lint or cotton around the sound and saturating it with the solution of full strength, it will be found easy of introduction. Probably the greater portion of the iron is lost in the cavity of the neck by the compression of its orifices, but a small part of it remains on the cotton, even after its withdrawal, and from its constringent effect on the cavity must be of service. It is very noticeable that the irritable condition of the organ is lessened by this plan, much as we see in stricture of the urethra after bougies; and uterine colics are less severe and frequent, probably more from the dilatation than from the topical medication.

I have cured two cases of extreme prolapsus of recent origin; in both cases the womb protruding between the thighs, and one of them menstruating in this condition while confined to the hospital, by the use of the ring pessary. In one of them I used Sim's flexible metal, and kept it in until pregnancy was three months advanced. I have very little encouragement to give from my experience with old cases. Operations on the vagina by neither knife nor caustics have given satisfaction, and they are painful and hazardous. Amputation of the cervix has been tried by Hugnier and Chassaignac, and with good results. Dr. Nott has operated for me on two cases with enlarged necks. One of them was much benefited for a time, say six months, but the hypertrophy is returning; the other is a confirmed case of hysteria.

Flexions of the uterus are still more unpromising than versions. Late investigations seem to show that a softening of the tissue takes place at the angle formed by the bending of the organ. All the symptoms of version exist, and the interruption to the circulation is greater, and the egress of the catamenia more difficult. The body of the uterus is enlarged, and contains fluid—often blood or a thin mucus amounting to hydrometra—

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though I have never witnessed the immense distention that obtains in other forms of uterine disease. It has been proposed, in cases of confirmed flexion where it is impossible to straighten the womb, and when, if practicable, the force exerted would rupture the fibres and produce metritis, to divide the internal os; and some have gone so far as to practice an operation for making a new channel more direct and open than the old one. It is consolatory, in view of the hopelessness of a radical cure of this affection, to record the opinion of Scanzoni, that "flexions of the womb do not acquire any importance, nor are followed by any serious dangers, save when they are complicated with an alteration in the texture of this organ." His recommendation is, to apply a few leeches every week or two, in hope to relieve engorgement and the pathological changes that result, and by subduing inflammation to keep the patient comfortable. He cites several cases, where the autopsy proved the existence of this condition, and where patients dying of other diseases had never been seriously incommoded by this mal-organization. I had an instance lately, of a lady who came to this city for advice, which strongly corroborates this opinion. She has been married twice, and, as one would naturally suppose from her history, sterile; but she is now upward of thirty, and though delicate, has menstruated scantily, but regularly, and enjoyed a fair share of health, with but two exceptions—one about six years ago and again recently—both probably inflammations produced by cold or fatigue, to which the flexion predisposed. This is the most extreme case of anteflexion I have ever seen, and conveys to the touch the feeling of a tumor along the anterior wall of the whole vaginal canal. Besides attempting to subdue inflammation, I divided the posterior lip freely, as the external os was impervious even to a small sound. She now menstruates with more ease, and I hope may become pregnant.

There occured some months ago quite an interesting discussion before the Obstetrical Society of London, on the subject of dysmenorrhœa. Drs. Sims and Bennett had previously discussed it in the *Lancet*. the former contending for its purely mechanical origin, and advising free division of the neck of the uterus by the scissors, as the remedy In this form of difficult menstruation, Dr. Simpson's mode of operation, by a mere linear incision through the strictured parts, seems to be free from the dangers of hæmorrhage, and equally successful as the other. In the course of the discussion very few of the surgeons present, and they were the ablest obstetricians of London, were willing to admit that they had divided the internal os. In the few operations that I have performed of this character, I introduced the uterotome an inch and a half before cutting, and thought that I had failed in completing the cure, when the instrument did not

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penetrate to this point. I have had two striking instances of the benefit of this operation, in ladies who have been subjected to treatment for years under the most intelligent physicians. In both of them impregnation took place a few months after the incision.

But, unfortunately for the sex, dysmenorrhœa is due to many other causes, such as derangement of the digestive organs, gouty or rheumatic diatheses, hysteria or neuralgia, inflammation of the os, and from ovarian irritation. It is very plain that nothing less than an appreciation of the cause and an attempt by constitutional and other remedies to remove it, can prove efficacious We have all had our tilt with "irritable uterus," and few of us have come off any better than Don Quixotte with the wind-mills. Some women are so constitutionally nervous, that as soon as the period approaches, they become chilly, with cold feet and clammy hands; pain reaching along the ligaments to the ovaries; distressing nausea and retching. Again we have others with repulsive pains and contortions like those of childbirth, in which patches of membrane of greater or less size are forced out with temporary relief. Tyler Smith suggests, that during the monthly nisus, the epitheleum lining the cavity of the uterus slowly melts away, and the blood gently flowing from the denuded surface constitutes the catamenia. If this be the physiological condition, anything that interferes with this periodical moulting and causes it to come away irregularly and in flakes, may give rise to the pain and attendant phenomena. In such cases the plan of swabbing the uterine canal, in the manner alluded to above, I can safely recommend. It is equally useful when menorrhagia succeeds the dysmenorrhœa—a thing of not unfrequent occurence. Iodine and iron are the substances preferred, according to the effect desired, whether alterative or astringent.

Uterine leucorrhœa has for its source of supply the glands of the cervix. It has been abundantly proved that these glands, in a normal condition, secrete a bland fluid like the white of an egg, just enough to plug its canal. Inflammation, from whatever cause produced, excites a greater flow of this secretion, and it becomes more highly colored and sometimes tinged with blood. If this is allowed to go on, the discharge becomes more acrid, and excoriates the os as it trickles over it, removing the epitheleum and causing those abrations called ulcers, more or less superficial according to the time of their duration. The blood vessels which supply the lining membrane of the cavity being in communication with those of the parenchyma, we often find the two structures simultaneously affected. It is in this affection that caustics, such as nitrate of silver, acid nitrate of mercury, and the like, have gained a deserved reputation. There is no other plan by which you can reach the diseased surface with

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equal facility and accuracy. Some prefer the silver in substance; some in solution; some in ointment; while others like nitric acid or the acid mercury. The mode of applying these substances, whether lightly or more severely, will make one answer nearly as well as the other. In inexperienced hands, certainly the nitrate of silver is the safest. Perchloride of iron, where there is a feeble and lax state of the parts, is equal to any of them.

In controlling metrorrhagia resulting from intra-uterine fibroids, I wish to record my decided conviction of the value of bromide of potassium; that it also lessens the pains attending this condition, I have satisfied myself from the observation of several bad cases. In the reaction which must follow the present tendency to overrate the value of a new remedy, I hope its usefulness here will not be overlooked I observe that in Germany, where this practice originated, from the success attending the use of waters containing bromine, both internally and for baths, Scanzoni classes bromide of potassium with the iodide of the same salt, and does not rely on it in these tumors. There is one remark that he makes which deserves attention, and that is to this effect—that the enlargement of the walls of the uterus which attends fibroid growths, is influenced by alteratives, but not the tumors themselves.

With regard to such tumors as are developed in the parenchyma of the womb (interstitial), or such as crop out on the exterior (subperitoneal), I have seen no operations attempted. In two cases of large fibroids attached to the fundus of the uterus, I have attempted operations. The first was a lady from the interior, of naturally fine organization. She was reduced to extreme anæmia, from the long continued and excessive hæmorrhage. and had waited a long time for the tumor to descend into the vagina, so that it might be ligated; but as she was nearly exhausted and longed for relief, her physician gave her Meig's chapter on the subject, in which he says he sent a patient home, with the assurance that she must prepare to meet death with equanimity, for an operation within the uterus was hopeless. By means of a double canula, like Gooch's, with a screw attached to tighten the thread, the tumor, about the size of a medium pear; was strangulated and dropped off on the third day. During the time between its ligation and expulsion, the lady was hovering between life and death, with a flickering pulse and ghastly countenance. Our chief reliance was brandy and opium. She afterward reacted, and is now a stout and rosy-faced woman. The other case was not so fortunate. She had been for years suffering with menorrhagia, and metrorrhagia latterly. She had not been examined for years, and generally used her own domestic remedies for checking the flow. At last she assented

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to the request of her daughter to have an examination made, and I found a very large intra-uterine fibroid. As death was imminent, I advised her, as her only chance, to submit to an operation. Dr. Nott very kindly assisted me in the attempt to remove it. The pedicle of the tumor was so short and broad, and its attachment so high up the fundus, as to make it one of the most difficult manipulations to throw a ligature of any description around it. We tried annealed wire, thread, etc., and finally, upon tightening the wire, when we thought we had included the tumor, the ligature snapped. The *ecraseur* was tried a second time, after a few days' rest. A larger wire was with difficulty applied, and upon attempting to cut through by steady traction, it gave way. Here we abandoned the operation. Great constitutional disturbance ensued, with deadly pallor and nausea. The discharge from the vagina became darker and more offensive, and about the third day I found the tumor detached and decomposing. But before I had the means of extracting it, she was sinking so rapidly that I thought it advisable not to disturb her. I forgot to say that the tumor was as large as a small cocoa nut, and the *cervix uteri* had entirely disappeared by expansion; but we were compelled to make an incision about two inches in length from the *os*, in order to facilitate the operation. In this case, and perhaps in both cited, the knife would have been safer, for the hæmorrhage might have been controlled by plugging with perchloride of iron, and we could have avoided the stench and poisonous influence of the decomposing mass.

The more I have been called on to treat diseases of this character, the stronger has grown my conviction that organic diseases, involving a change of structure, admit too often of only partial relief. He must be a bold man who promises a cure under such circumstances. In acute diseases, especially of the self-limiting kind, nature is competent to relieve the system, if you wisely assist her efforts, or even refrain from mischievous interference.—*New Orleans Medical and Surgical Journal.*

DENTO-NEURALGIA.

Read before the New York Society of Dental Surgeons, by A. C. Castle, M. D., N.Y.

Neuralgia or nervous pain is not only a symptom of almost all acute and most chronic diseases, but also a distinct affection of the nerves themselves. To this latter, the term *Neuralgia* is applied. It may have its seat in any of the nerves of common sensation, and in some instances affects those of *organic* life. Neuralgia may arise from many causes; sometimes no cause can

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be discovered during life or after death; in which case the disease is attributed to a change in the conditon of the nerve itself. In other instances it is the consequence of a debilitated state of the system and follows prolonged lactation, long-continued and excessive discharges or exhaustion from loss of blood. It also occurs in anæmia, etc. I need not occupy your time with the numerous details of the various classifications. The neuralgia to which I call your attention is *dento-neuralgia*, or those nervous pains experienced in remote parts of the body; in the ear, temples, scalp, the muscles of the neck, and intercostal muscles; in the shoulders, arms, fingers, chest, heart, liver, womb, back, loins, calves of the legs and toes: superinduced by an irritable condition of the dental system.

Of the many divisions into which the general pathology, etiology, etc., of the organs of the animal system have been divided, none have met with so little attention or investigation as the special pathology of the nerves of the dental system. It has been a great misfortune to the dental profession that these dento-neuralgic affections, in their connection with madical dentistry, do not pay the dentist as well as his manipulations for plugging teeth and making substitutes. Hence with a few exceptions, the general dental practitioner finds no charms in the study of dento-medical philosophy, so necessary to the accomplished dentist. He chiefly expends his erudition in solving the problem, "which is the most aristocratic, which takes precedence—the plugging decayed teeth with gold, or making substitutes?" As the dental profession, comprehensively, knows little or nothing of dento-neuralgic disease, it, of course, receives the go-by, and is left to be treated by the family physician. The treatment indicated has therefore generally been *empirical:* as has been the diagnosis, implicating parts as being idiopathically, which have been merely symptomatically and sympathetically affected.

The ever-recurring attempt of offering a pseudo-principle—with here and there a glimmer of an idea of a remote and exciting cause without a fact to demonstrate or explain the theory—has been all that has ever been afforded to medical and dental science to enlighten and elucidate the real nature of the lesions exciting the various complex characteristic dento-neuralgic derangements implicating *sympathetically* various regions of the body. It is true that many distinguished medical men have zealously employed their knowledge in the investigation of neuralgic phenomena; but, to this period, so far from affording any insight for our government in their treatment, or throwing any light upon this important and interesting subject, their efforts to elucidate the causes of neuralgic disease have rather tended to render them still more obscure; thus adding to their ignorance of phthisis, rheumatism, gout, etc., an additional opprobrium

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upon medical science. In vain I have consulted medical, surgical and medico-dental literature upon the subject of dento-neuralgic affections. Professor Harris, in his "Dictionary of Dental Science," after all *his* research, only furnishes the definitions of writers on *odontalgia*. Mr. Thomas Bell, of English celebrity, says: "It not unfrequently happens that parts remote become the apparent seat of pain from the *exposure* of the nerve of a tooth." Here you will observe that Bell refers only to exposed nerves. He does not appear to suppose or to think that dento-neuralgic sympathies are produced otherwise. The eminent author, Dr. Good, says: "Neuralgia often is an idiopathic affection dependent upon a peculiar irritation from a cause we can not trace. It is more frequently a disease of sympathy produced by pregnancy, rheumatism, or acrimony of the stomach." The distinguished Dr. Wood speaks of neuralgic affections from the teeth, only where the affection is marked by pain in the teeth. Professor Bond, in his Treatise on Dental Surgery, says: "It is not certain whether the seat of the disease is in the neurilemma or in the nervous pulp. It will at once be perceived that the dentist must be called upon to discriminate between this disease and ordinary toothache; and unless he be properly informed upon these subjects, he may add to the terrible sufferings of the too confiding patient. In most cases the neuralgia of the jaw is at first mistaken for toothache, and ignorant dentists too frequently have extracted tooth after tooth; and have at last relinquished the patient to his aggravated sufferings." The professor then says: "From toothache depending upon exposed nerves, neuralgia may be diagnosed by the" (self) "evident centralization of the pain in a certain tooth; by the aggravation of it *when the tooth in fault is touched*, and by the positive evidence of a cavity in a tooth with an exquisitely sensitive pulp exposed." Where such a simple odontalgic condition exists, it certainly needs no ghost to instruct us. Now, I have met with very many teeth, with pulps exquisitely tender *to the touch*, exposed to all external agents, yet no pain whatever was experienced *in* these teeth; but sympathetic pains existed elsewhere. This, especially, refers to the "wisdom teeth," in which, in nine cases out of ten, if the nerve is exposed and exquisitely tender to the touch, the pain is experienced in the teeth, jaws and face anterior to the *dens sapientiæ*, with neuralgic affections in the ear and temples, with nervous headaches, muscular neuralgic pains in the scalp, neck and various parts of the body. It is diseased wisdom teeth which cause "extraction of tooth after tooth," from the simple fact that the pain almost invariably is experienced in the teeth anterior to the wisdom teeth.

The following illustrative cases of dento-neuralgic sympathies are on record. The great Dr. Rush, mentions a case of "mad-

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ness occasioned by diseased teeth *which were no ways painful* to the patient, and therefore offered no diagnostic mark that the teeth were the proximate and exciting cause of the mania affect- the patient." Dr. Rush also records *"a supposed case of hip-joint* disease, complicated with *rheumatic* affections, being *immediately* removed after the extraction of a tooth, which proved to be the exciting cause of the sympathetic affection of the hip-joint and adjacent parts."

The *London Lancet* records a case of neuralgia of the womb immediately disappearing after the extraction of a diseased tooth. The distinguished dentist, Horner, of Philadelphia, relates a case of *epilepsy*, at once disappearing after the extraction of some diseased teeth.

It is with the view, therefore, of adding to the *not* very extensive stock of information, all that I have been able to collate on this subject, that I was induced to offer the subject of dento-neuralgic phenomena for the consideration of this society this evening, hoping that the practical observation of its members would furnish some new data that would add profitably to dental science, with the view also of repeating my remarks made in a former paper: "That when the art and science of dentistry are practiced (less as a *trade* for making money) with better professional knowledge, *then* the professional character of the dentist must compel the medical faculty to acknowledge dentistry as a specialty in the healing art." I now repeat the sentiments of that paper, with the additional remarks, that to dental students is reserved the honor of elucidating many affections hitherto considered idiopathic, neuralgic and rheumatic, but which are traceable to derangements of the dental system, as to them was reserved the honor of introducing chloroform, ether, and ether-spray for surgical operations.

Few afflictions affecting the human family present themselves to the medical practitioner that occasion so many vexations, or produce so many perplexeties and mortifications to professional feelings and pride, as does the *unsuccessful treatment* of these painful nervous derangements of the various parts of the body, known and accepted by the not very precise term of "neuralgic affections." The discussion, to-night, upon this important subject, should be peculiarly interesting to the practicing dentist, who should learn to esteem his duties as something more exalted than mere mechanism. He will discover that they are far more extended than the limits of dental mechanical skill; that, with an ordinary amount of anatomical, physiological and pathological knowledge, he will hold communion with the physiological mechanism, a part of Nature, great and wonderful as it is beneficient and good. The object, then, of the discussion of this truly interesting and comprehensive subject is to establish data, for

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the purpose of elucidating and demonstrating the physiological and pathological condition of the *dental* in their relation with other sympathetic nerves.

Nosologists have named neuralgic affections according with the locality of the nerves *supposed* to be the seat of the pain: thus, *neuralgia facialis* or *tic douloureux*—the *tic convulsif* of French authors; *neuralgia, pollicis sciatica;* the *ischias nervosum,* or pain in the branches of the great sciatic nerve; and so forth with other nerves.

Thirty years' observation and investigation have enabled me to throw some light in elucidating the proximate cause of many neuralgic affections, demonstrating that a large number are sympathetic and symptomatic of dental derangements; but which nosologists have named in accordance with the region of the body in which the pain is experienced.

I have named these sympathetic neuralgic affections, DENTO-NEURALGIA, predicated upon the proximate cause—the peculiar condition of super or sub-excitement—irritation if you please—of the dental nerves—the fifth pair of nerves—within and upon the bony tissues of the teeth and their maxillary bones and investing periosteum in their anastomosing connection with other sympathetic nerves; a morbid condition of the bony structure of the teeth, whether from original constitutional deficiency, or produced by vitiating gastric acids, or the premature decay of the teeth dependent upon the absence of proper nutrition, or from scrofulous, scorbutic, or syphilitic diathesis, the action of mercury, arsenic, antimony, iron, quinine, iodides, etc.; all of which exert their several peculiar influences upon the dental organs, and hence upon their nerves, causing dento-neuralgic symptoms in the various parts of the body.

It is not my province here to detail the affections of the dental system. But I will mention one or two exciting causes. We find the dental tissues irritated and changed in character from the causes I have already enumerated. Any one of you may observe in many of the teeth you daily extract the animal portion absorbed from the earthy constituents of the superior portion, or apices of the fangs, leaving them in a semi-transparent condition; the lower portions and necks to the crowns of the teeth remaining opaque and normal in their character. While this change is being produced in the fangs, the alveoli and the dental periosteum become exquisitely sensitive—moderately to cold or warm applications—but intensely acute to the presence of acids, sweetcakes and confectionery. These are the primary effects of dental derangement and the premonitory symptoms of dento-neuralgic affections. These teeth are often glassy, brittle, breaking readily under the extracting instruments. In many of the transparent fangs of such affected teeth, you will find the

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extreme points or apices *absent* from absorption; impressing the uninitiated dentist with an unfounded idea that he has broken off the apex of the fang in the act of extracting the tooth; the sharp, spiculated points prove the contrary. In the class of teeth whose crowns are worn down and their nerve-chambers filled in by a deposited amber-like dentine, we too often find the maxillary absorbents exercising their baneful influence upon the roots of the altered teeth, with recession of the gums and their alveoli. Medical practitioners, and, alas! dental practitioners too, designate these affections, "scurvy in the gums."

The absence of antagonizing teeth is another exciting cause for dento-neuralgic affections. The lower jaw, finding no resistance, is, by the contraction of the temporal muscles, closed to an unnatural extent toward the superior maxillary, which, acting like an overshut door lacking the resistance of the proper door-post, overstrains its hinges; so the inferior maxillary bone overstrains its joints, affecting the nerve to an extent to superinduce nervous irritability, and hence sympathetic neuralgic paroxysms. The dental system thus affected, presenting no external physical disintegration (decay), exhibits some of the causes of dento-neuralgic affections in contradistinction to *odontalgic pains* portrayed by Professor Bond. Dento-nervous irritation being established in the dental system, which from "the infant muling and puling in the nurses arms," to "the last scene of all," daily presents to our observation neuralgic, symptomatic and sympathetic paroxysms. Thus are daily presented to the medical world, the physician, the surgeon and the dentist, innumerable instances in which each and all may recognize the essential starting point of a correct diagnosis of many rheums, pains and convulsions, which, without any apparent exciting cause, experience shows to affect patients from childhood to old age, depended upon and arising from a source entirely overlooked and even little dreamed of in medical and dental philosophy. It were useless to cite the everlasting number of cases where patients have been subjected, for years, to the most harassing empirical treatment. Narcotics, sedatives, emollients, irritants, stimulants, counter-irritants, moxas, nervines, antispasmodics, sudorifics, phosphates, chalybeates, alkalies, acids, arsenic, mercury, copper, bismuth, iodine, potassa, quinine. Phlebotomy, cupping and leeching. Alteratives and aperients, cold and warm baths, sulpher-baths and fumigation, sea bathing, electricity, the surgeon's knife for excision of sone innocent, unoffending ganglionic centre. Then homœopathy, hydropathy, spiritualism, polarized clairvoyance, Thompsonianism, nostrums and laughing gas, have all stepped in and taken their turn, "certain to effect a cure." If the wretched sufferer has had sufficient stamina, or vital force to resist these terrible onslaughts and assaults upon a catadel so frail

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—so wonderfully and fearfully made—it has been to sink into hopelessness and despair. Very many of these severe cases I have seen wherein this mystery has not been even thought of by medical men until the tortured patient has been accidently and suddenly relieved by the dentist's turnkey or forceps.—*Dental Cosmos.*

EARLY DIAGNOSIS OF THE BACKWARD CURVATURE OF THE SPINE.

By JULIEN S. SHERMAN, M. D., Chicago.

The importance of diagnosing this disease in its incipiency must be apparent to all. Yet, in a large majority of cases, the difficulty is not suspected until the projection of one or more of the spinous processes reveal the fact that the disease has already advanced to a change of structure, and that a portion of the bodies of the vertebræ have undergone inflammatory softening, followed by absorption, and in many the cavity of an abscess formed.

The early recognition becomes much more important, when the fact is considered, that, the deformity once produced, we can do but little toward restoring the normal form of the spine. It remains a permanent change in its flexibility and symmetry. The arrest of its increase is the object to be accomplished by treatment.

The disease may, properly, be divided into two stages.

1st. Simple inflammation of the intervertebral cartilages.

2d. Caries, suppuration, and deformity.

Very seldom is the inflammation of the tubercular origin, but traumatic, following some injury to the spine, occasioned by a fall or blow upon the back, or violent flexion.

The age of the patient will also assist us in diagnosing; the disease being almost entirely confined to an early age, varying from one to eight years, during which period the spine is yet in the process of development and more liable to injury fr m slight causes.

Boys are more often the subjects of its attacks than girls, the reason of which is not obvious.

At the commencement of the first stage, the child will be noticed to play less vigorously than has been its custom, its motions are not as free, and there is an appearance of stiffness to the back, and an effort to remove the pressure from the inflamed tissues by resting the elbows on a table or chair, and supporting the shoulders and chest. When reaching to grasp

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articles from the floor, it will endeavor to accomplish the same object by placing one hand on the knee.

The inflammation, once started and aggravated by motion and pressure, slowly increases. The child now complains of pain, the position of which will aid us in determining what portion of the spine is affected. Seldom, in this stage, is there pain in the back—if present, it is deep seated, and tenderness can not be detected by manipulation—but it is confined to the stomach and bowels; also radiating on the sides. It is not of a severe or spasmodic kind, but dull and persistent. These symptoms are often attributed to disorders of the digestive apparatus. They will be distinguished by the condition of the tongue and secretions, which, in this stage of spinal disease, are not affected. Very rarely, the cervical region is involved, and the pain then is situated in the shoulders and sides of the neck. Difficulty of deglutition and disturbed respiration are sometimes experienced, although no special disease of these organs can be detected. The sleep of the patient is also disturbed, and the pulse increased in frequency.

If, in a period ranging from one to eight months from the commencement of the disease, the back be carefully examined, it will show, in some portion of its extent, a *bulging;* not a sharp *angular* projection, but a rounded prominence. The inflammation is yet limited to the cartilages and has not involved the bones. The projection is, consequently, produced by the approximation of the bodies of several vertebræ, which continues the curve over a larger portion of the spine and gives it the oval appearance.

Soon the sharp projection of one of the spinous processes of the vertebræ makes its appearance, and the characteristic sharp angle is formed. It has now advanced to the second stage and the deformity has begun. The inflammation has proceeded to the body of the vertebra corresponding to the projecting process; softening and absorption of its structure has taken place, allowing the bodies of the vertebræ above and below to approximate more closely, and give the appearance of a backward dislocation of the diseased one. The destruction is now more rapid, and caries and suppuration soon follow. The membranes of the spinal cord, and sometimes the cord itself, becoming involved, partial paralysis of the spinal muscles often ensues, causing one shoulder to drop, and giving the patient a sidewise motion in walking. If confined to the lumbar region, the same pathological condition causes reflex contractions of the flexor muscles of the thigh, which may be mistaken for hip-disease. The differential diagnosis is, however, easy. There is no pain or tenderness in the hip-joint, and none referred to the knee, so characteristic in that disease.

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The angle is sometimes projected latterally, simulating lateral curvature. It may be distinguished from this by its abruptness and sharpness. The lateral form being an even and rounded curve, as it advances it assumes more the backward direction.

The symptoms in the first stage are sufficiently characteristic, that a close observer will not fail to detect the disease. We can seldom err in our diagnosis, when we find them following an injury; and only on their early recognition and prompt treatment can deformity be avoided.—*Chicago Medical Examiner.*

ON THE COMBINATION OF CHOREA WITH PREGNANCY.

By Dr. Bathurst Woodman.

The concurrence of chorea with the pregnant condition is, I imagine, a not very frequent event. Certainly very little mention is made of it by obstetric authors, and as I have myself only met with two cases, I have been induced by our President, Dr. Barnes, to lay before you the main facts of one case, in order to elicit further opinions and experience, with a view to both prognosis and treatment. The first case which attracted my attention to the subject, was an out-patient of Dr. Down's, at the London Hospital, a primipara, in whom chorea supervened on a six weeks' pregnancy, from fright at seeing her husband, as she thought, killed by an accident. She soon recovered from the convulsive movements, under the use of arsenic and nourishing diet, but labour came on at eight months, and the child had a cleft palate, hare-lip and webbed fingers. As Dr. Down intends to publish full details of this case, I pass on to the more recent one, which is the subject of this paper, and which, in some particulars, affords a considerable contrast.

Caroline S., æt. 18, an engineer's wife, residing at Bow, was admitted an in-patient, under Dr Frazer's care, on the 8d of January, 1865, for acute chorea. She was then about six and a half months pregnant with her first child, and had had involuntary jerking movements, chiefly of the head and upper extremities, for nearly three months. Her mother states that she suffered only from measles and whooping-cough up to the age of seven, when she was first attacked by chorea, "she thinks from fright." From this she was never free for more than a month or two, till a little after she was thirteen, or in point of fact till her first menstruation. At eight years old she had something like rheumatic fever, and soon after that, what her mother calls "typhus," but which is evidently "typhoid" fever. This was not till a full year after the first attack of chorea. She never

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had scarlet fever. From the age of puberty till her present seizure, she was entirely free from choraic movements—an interval of five years. No reason is known for their recurrence. She is a thin, delicate person, small in figure, of light brown hair, and eyes of nearly the same color; was anæmic, and much impressed with dread of impending danger, as she was told by some of her friends to expect convulsions in labour. She had a distinct systolic bruit, heard at the apex of the heart. Her bowels were regular, tongue clean and appetite fair. The urine was of specific gravity 1020, and contained no albumen, but about two grains of sugar to the fluid ounce (a condition which, in common with Dr. Goolden, I hold to be not unusual in chorea); in this instance, several independent tests were relied on for the detection of the sugar. The fœtal tic-tac was only heard once or twice, owing to the unusual loudness of the placental bruit, which was heard all over the abdomen anteriorly, especially below the navel. (It was afterwards found that the placenta, which was very small, was attached to the uterus anteriorly, within the "dangerous zone," but not amounting to placenta prævia). She was first treated by steel, and afterwards, by Dr. Barnes, with the diphosphate of zinc and iron, but, in conformity to the too severe rules of the hospital, was made an out-patient at a fortnight's end, at which time Fowler's solution was given to her.

About the end of February the chorea quite left her. On March 22d, her mother came to me in great alarm, stating that the patient had been in labour twenty-one hours, and that the midwife thought there was "something wrong." I accordingly attended, and found the child's head, which was rather more than usually developed as regards bone, tightly wedged in the inlet of the pelvis, and presenting in the first position (of Naegelé). The os uteri was well dilated, but in spite of strong pains, no progress was made, and I therefore pushed up the head a little, introduced Dr. Barnes' long forceps, and, in twenty five minutes, delivered her of a full-sized, perfectly formed and living female child, whose only imperfection, if it be one, was a little "tongue-tie."

She flooded a little the first two days, but had no choraic movements till four days after labour, when there were slight twitchings of the right hand, which she states "is weaker than the other." These movements only lasted three days, and she has now apparently recovered well, in spite of sore nipples, which threatened mammary abscess, but succumbed to tannic acid. The child has no chorea yet The mother has none now, but the mitral bruit persists, and she is still rather anæmic. The points of interest in the case are, I think, the following: First, the priority of the chorea to the rheumatism; next, its

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disappearance when puberty became established; its reappearance before she "quickened;" its recession at the end of the eighth m)nth of pregnancy, and the slight renewal of the movements after the flooding consequent on labour.

I confess, that for myself, seeing as I do about 200 cases of chorea amongst in and out-patients at the London Hospital in the course of the year, and finding the majority badly nourished, and anæmic, I am inclined to believe that these movements are chiefly reflex, and connected with the sympathetic nervous system. And, notwithstanding the favorable issue of this case, so far, I think, the complication of chorea with pregnancy is an event of itself calculated to cause anxiety, and to call for prompt measures to remove all sources of irritation, and to improve, as far as lies in our power, the general nutrition of the patient.

I have since heard of another case of four or five months in a primipara, which ceased, under tonics, a month before delivery. She had no unusual symptoms. Dr Lever publishes five cases in "Guy's Hospital Reports," vol. v.

The case detailed at length in my paper has since had a subacute abscess in each breast, but no return of the chorea. She and the child are both doing well.—*Trans. London Obstetrical Society.*

THE MEDICAL REPORTER.

ST. LOUIS, MARCH 1, 1867.

Announcement to our Patrons.—The present number commences the second volume of the ST. LOUIS MEDICAL REPORTER. To the establishment of our enterprise very much credit is due to the energy and aid of our publisher, Mr. P. M Pinckard, but at the same time we desire most warmly to acknowledge the consideration of our patrons who, by their communications and subscriptions, have contributed so generously, thus far, to our success. Truth to say, when we look back upon the difficulties which surround the initiative of every literary undertaking, especially a medical journal, we feel inclined to congratulate ourselves that now we can advance with full confidence as to our success, in so far as our merits deserve: for now our basis of operation is sure and firm.

With renewed energies, therefore, we enter upon another year, and as we stated in our Prospectus, we desire to reiterate, that our great object is the advancement of medical science. The valley of the Mississippi is extensive enough to afford, in its dis-

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eases, labor for him who will work, and food for the reflective mind. Too little has been done by the medical man West toward the improvement of his profession; too little is contributed by him to the general fund of knowledge. If it be but the statement of a few facts, well ascertained, which may be gathered in the course of a year, how much would they redound to his credit in a long life of constant attention to the sufferings of his fellows. It is to gather up and preserve these observations that a journal may be of use, and hence may draw other observers into the field with ultimate advantage to human kind. For this purpose we have brought our journal before the profession. To a considerable extent we already are in close relation with the great West. We desire to continue this relation and reach still further, so that ultimately we may call upon every medical man West to give some account of his labors.

With facilities and opportunities of no mean extent, and daily increasing, our relation with publishing houses East, our exchange list gradually filling with foreign medical literature, our department of original communications supplied by some of the best writers East as well as West, we shall be able to place before our readers, punctually and regularly, every thing of any value in medical science, and we shall spare no labor to so develop the means at our command, as to render our journal important enough, we modestly trust, to be of some value, and to compare favorably with the best in the land. We shall seek no personal advantage; all we ask is, that, for the sake of science, medical men shall assist us in carrying out, to its fullest extent, our present enterprise.

We beg leave to draw attention to the business department of this journal. It will be found that the subscription price is very reasonable for the size of the publication, which, in a year, makes a volume of at least eight hundred pages; we commute with several of the most valuable journals in the country; our advertising rates are as low as can be found elsewhere, and we can always insure promptitude and good faith in every transaction.

The Missouri Dental College.—The first annual commencement of this institution was held at O'Fallon Hall, corner of Seventh and Myrtle streets, on Friday, the 22d ultimo. It is with much pleasure that we notice from day to day the increase in the facilities for education in whatever direction. The Dental College of Missouri initiates a new era here in the teaching of a specialty in medicine; not the least important feature of which is its recognition by medical schools, several members of whose Faculties form part of that of the school of Dentistry. The proceedings on the occasion were of much interest, being

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introduced by a prayer from the Rev. Dr. Nelson, followed by some very happy and pertinent remarks by Dr. Isaiah Forbes, on delivering the diplomas.

Dr. H. Judd, Dean of the Faculty delivered the Valedictory, which was received with high approbation by an audience respectable in numbers and intelligence.

The following gentlemen received the degree of D. D. S.:

Wm. O. Kalp, Muscatine, Iowa; E. J. Toof, Fort Madison, Iowa; C. W. Rivers, Pittsfield, Ills.; G. S Miles, Jerseyville, Ills.; A. W. French, Springfield, Ills.; T. W. Reid, Macon City, Mo.; Isaac Comstock, St Louis, Mo.; G. A. Bowman, St. Louis, Mo.; George Crawford, St. Louis, Mo.; Edward Hale, jr., St. Louis, Mo.

The Missouri Medical College.—The annual commencement of this time-honored medical school was held in the large hall of the Mercantile Library.

The exercises were opened with some excellent music, followed by a prayer from the Rev. Mr. Lacy.

Dr. J. N. McDowell conferred the degree of Doctor of Medicine on the graduates, following in a few very appropriate remarks, part of which are spoken in Latin, and all in that impressive and interesting manner so peculiar to the eminent Professor.

Dr. J. H. Watters gave the Valedictory.

We have seldom listened to a better address, as well in point of construction and delivery, as to the subject matter. Notwithstanding its really metaphysical character, being the modern views of philosophers upon the intimate nature of the universe, it was listened to with close attention by a very large and evidently appreciative audience.

Altogether, the commencement inaugurates a new era of energy and usefulness on the part of the old Missouri Medical College.

The following is a list of the graduates:

John L. Allison, Hamilton T. Barnes, Elam F. Bevens, John Bledsoe, John F. Bryan, Wm. B. Burke, Wm. A. Byrd, John A. Carter, Henry S. Cearnal, Chas. A. Carthrae, Jesse P. Coffey, John L. Casselly, John M. Cravens, Levi M. Dixon, Henry T. Fullerton, George W Hutchinson, George F. Jenkins, Warren J. Lansdown, John L. Martin, Joseph W. Rose, Wm. S. Smith.

The ad-eundem degree was received by the following gentlemen:

John H. Britts, Aiken M. Sublette, H. W. Carter, George E. Chinn, W. H. Morris, S. Riddell, P. T. James, C. DuHadway, F. O. Drake, Gallatin G. Lyon, George W. Nichols, C. Chenowith; and an honorary degree was conferred on Prof. G. C. Swallow.

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The St. Louis Medical College.—The twenty-fifth annual commencement of this highly prosperous institution was held at O'Fallon Hall, corner of Seventh and Myrtle streets, on the evening of Friday, March 1st, in the presence of a large and respectable audience of ladies and gentlemen.

Dr. J. T. Hodgen, Dean, conducted the order of Exercises.

Mr. Thomas B. Turnbaugh, the representative of the Graduating Class, delivered, in good style, an exceedingly appropriate salutatory, which was listened to with much interest; after which Dr. Chas. A. Pope conferred the degrees upon the graduates. In a neat and finished address, admirable, not only for its systematic arrangement and carefully selected language, but for its precise and graceful delivery, he gave that admonition and advice to the class for their future conduct in life, as he well might give, exemplified, as we all know, by a long career of usefulness, and the most prominent position in his profession.

The valedictory was then delivered by Prof. M. L. Linton in his usual eloquent and impressive style. His subject, the predominence of mind over matter, or the existence of a great first cause in the laws of the universe, though unusual in addresses of this kind, was not unsuited to the student, nor yet to the public. The reasoning was clear and connected, the illustrations most apt, and the whole discourse impressed with the strong good sense and acute intellect of the learned Doctor. He has undoubtedly a strong hold upon the affections of the students, and he certainly receives their highest respect, adjudged, as he is by them, to be the Nestor of his profession.

The following is the list of the Graduating Class:

E. S. Armstrong, James X. Allen, D. M. Anderson, J. D. Bennett, Wm. H. Cook, J. L. Collins, D. K. Cornell, W. A. Carter, R. S. Cowan, E. Crepin, Samuel Conway, J. W. Crowley, Harvey Dunn, M. B. Donegan, A. C. Davison, G. M. Devereux, D. B. Fowler, T. H. Ferguson, Joseph Fletcher, W. P. Gordon, Herman Greiner, J. D Hodge, Thomas Halpine, James H. Head, George W. Harkey, R. H. Ingram, Harrison P. Jacobs, R B. Martin, Wm. H. Mathis, J. W. McClure, John Mayger, J. A Posey, J. K. Pemberton, John Perrie, James S. Preston, C. D. Payne, George G. Rabb, Rudolph Schiffmann, Jacob Schlagenhauf, A. B. Shaw, Wm. P. Stafford, F. L. Stuever, J. H. Tharp, Robert Trevey, Thomas B. Turnbaugh, B. C. Vinson, E. C. Washington, L. M. Wright, S. R. Woods, Peter G. Woods, Wm. H. Wood, Wm. J. Yates, M. Yarnell.

Ad-eundem degrees were conferred upon Dr. Wm. Lough, of Kirksville, Mo.; Dr. Wm. D. Spore, of St. Louis, Mo.; Dr. Leon J. Willien, of Effingham, Ills.; Joseph F. Sessions, Miss.

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, MARCH 15, 1867. No. 2.

OSTEO-CYSTOMA OF INFERIOR MAXILLARY BONE.

Removed by JOHN T. HODGEN, M. D., Professor of Physiology in the St. Louis Medical College.

[Communicated for The St. Louis Medical Reporter.]

William Hill, a negro, born in Pennsylvania, aged twenty-eight (28), by profession a blacksmith, robust habits, but a little exhausted by hemorrhage, presented himself, January 2d, 1867, with the following story: Had always good health; received a kick from a horse in 1857, on the lower jaw; the jaw began to be painlessly enlarged in January, 1863; the growth was gradual; by December, 1866, had lost all the teeth of the lower jaw, except the second incisor canine, bi-cuspid and molars on left side. At this time he received a blow from the fist, which broke the jaw in front of the angle on the right side; was followed by rapid tumefaction. A considerable flow of blood occurred from a wound of the soft parts within the mouth opposite the site of fracture. This flow continued when he presented himself to me some ten days after the injury. The swelling was great, involving the whole front of the jaw and right side of the face. A wash, of solution of the per sulphate of iron, was used, and the hemorrhage ceased, and the swelling began to subside, so that by the 26th of January, 1867, it was but little

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larger than before the last injury. There was no tenderness or pain. On examination, the tumor was found to be as large as the two fists, and involving the bone from the second bi-cuspid tooth on the left side to the angle on the right, passing backward and downward upon the hyoid bone, and so filling the front part of the cavity of the mouth that the tongue was forced far backward.

On making pressure a crackling sensation was communicated to the fingers, as if a thin shell of bone was breaking down under the force thus applied. The soft parts over the most prominent point, viz—that corresponding to the right side of the chin, were thin, but healthy in structure. In consultation with Drs. Gregory, J. J. McDowell, Prewitt, Hall and Loring, it was agreed that this was a case of osteo-cystoma, and safely operable. We proceeded, with the assistance of the above named gentlemen, and in the presence of the medical class, to remove the tumor in the following manner, the patient being fully under the influence of chloroform:

An incision, beginning at the middle of the left side of the body of the jaw, was carried along the base of the tumor to a point opposite the angle on the right, fully down upon the tumor, thus, in the first incision, cutting the facial artery, which was secured at once, and other unimportant branches, these last not requiring ligatures. The lower flap was now carefully dissected off, keeping close upon the tumor, sometimes, indeed, chipping off a thin scale of the bony covering of the cysts until the lower part was fully exposed, all the soft parts being separated, except the genio hyoidæ and genio hyoglossi muscles and mucous membrane, taking care not to open the cavity of the mouth. The upper flap was now separated from the tumor, the mucous membrane divided, and the lower lip and other parts constituting the upper flap turned up over the nose, and held there by an assistant. A needle, carrying a thick ligature, was now passed through the tongue, the second bi-cuspid tooth on the left side removed, and a strong curved needle, carrying a thick cord, to which a chain saw was attached, was carried close to the bone

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on its inner side, and the saw made to divide the bone immediately in front of the first molar tooth.

Intending to make the fracture serviceable, the tongue was drawn forward by the cord through it. A few touches of the knife served to divide the mucous membrane and the muscles from the inner side of the tumor. The fracture now served as a second point of separation, and thus nearly the whole mass was removed. The cutting pliers soon completed the operation, by removing the parts involved in the disease remaining on the right side.

The chloroform had served its purpose well, as the patient was just at this time passing from under its influence. The patient had suffered no pain, had lost but little blood, none of which had passed into the mouth, for the reason that the buccal cavity was not opened until the last step in the operation was being completed. The inferior dental artery furnished some blood, but the flow was entirely checked by passing into the dental canal a piece of pine wood moistened with liq. ferri per sulphatis. In a few minutes the wood was removed, and no blood followed. Half a dozen twisted sutures, made with common brass pins, closed the wound, a few long strips of adhesive plaster, with Barton's bandage, completed the dressing. It was found now that the tongue did not fall back again into the throat; but the cord passing through it was left intact least it might give trouble.

The patient walked from the operating room into the ward, and seemed cheerful, suffering little; but a trifling reaction followed, with some fever and considerable tumefaction. On the 28th, Mr. Davidson removed the cord from the tongue, and on the 2d February, finding the swelling had, in a great measure subsided, he removed the bandages, and drew out the pins without disturbing the plaster. On the 5th of February the strips were removed, and the cuts found closed throughout. Indeed, all united perfectly by the first intention, except one part, and here healthy granulations rapidly completed the healing process.

The patient called to see me March 5th, and was entirely well,

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except a profuse flow of saliva. He eats with as much facility as before the operation, and speaks much more distinctly. No one would know an operation had been performed from simply observing the face; indeed, he is so much improved in his physiognomy that his friends hardly recognize him.

The tumor, after having been a month in alcohol, measures fourteen inches in its greatest, and nine inches in its least circumference, and is nine inches from one end to the other, over its convexity. A number of cysts, having thin, bony walls, make up the tumor. These contain variously colored fluids; one black almost as ink, another straw-colored, and thick, like linseed oil or honey, another clear and watery. Along the base the bone was thick on the left side.

The cause is doubtful—possibly from the kick received in 1857; if so, it would probably be due to slight extravasation of blood, or it may possibly have been due to simple dilatation of the cancellated structures of the deeper parts of the alveolar process.

RESULTS.—The tumor being non-malignant, and if, as we hope, it has been entirely removed, there will be no return; so that the prognosis is most favorable.

COMPARATIVE MORTALITY OF CHOLERA IN ST. LOUIS DURING THE YEARS 1849 AND 1866.

BY DR. G. ENGELMANN.

[Communicated for the St. Louis Medical Reporter].

In the number of the *Reporter* for December 15, 1866, there was published the statistics of the cholera epidemic which visited us last August and September, and compared it with dates of the epidemic in 1849, and the following years. These tables, however, do not fairly correspond, because in one are given the weekly, in the other the monthly, statements of the

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mortality, and they can, therefore, not well be used for comparison.

Below will be found corresponding tables comprising the eight most fatal weeks in both epidemics, from which interestig and important conclusions can be deducted:

Mortality in the Eight Worst Cholera Weeks in 1849. (*Estimated Population of the City,* 80,000).

FOR THE WEEK ENDING.	Absolute Number of Deaths			Proportionate number of deaths per 1000 inhabitants		
	From Cholera.	Other Diseases	Total.	From Cholera.	Other Diseases	Total.
June 11	191	92	283	2.4	1.1	3.5
" 18	404	106	510	5.0	1.4	6.4
" 25	589	174	763	7.4	2.1	9.5
July 2	619	325	944	7.7	4.1	11.8
" 9	591	221	812	7.4	2.7	10.1
" 16	639	228	867	8.0	2.8	10.8
" 23	269	173	442	3.4	2.1	5.5
" 30	98	132	225	1.2	1.6	2.8
Total for Eight Weeks	3,395	1,451	4,846	42.5	17.9	60.4

Mortality in the Eight Worst Cholera Weeks in 1866. (**Estimated Population of the City,* 200,000.)

FOR THE WEEK ENDING	Absolute Number of Deaths			Proportionate number of deaths per 1000 inhabitants		
	From Cholera.	Other Diseases	Total.	From Cholera.	Other Diseases	Total.
August 11	120	227	347	0.6	1.1	1 7
" 17	754	162	916	3.7	0.8	4.5
" 24	991	268	1,257	5.0	1.3	6.3
" 31	520	151	671	2.6	0.7	3.3
Sept'br 1	495	237	732	2.5	1.1	3.6
" 14	294	210	504	1.5	1.0	2.5
" 21	208	180	388	1.0	0.9	1.9
" 28	81	128	209	0.4	0.6	1.0
Total for Eight Weeks	3,458	1,563	5,021	17.3	7.5	24.8

*I assume the population as 200,000, not the estimate of 205,000, because a large number of the inhabitants, at least 5000, left the city on the outbreak of the epidemic.

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By comparing the original records, we find that during the worst 31 days of each epidemic the following numbers died:

In 1849, from June 15 to July 16,					
From Cholera,	2,954,	or per	1000	inhabitants,	36.9
From other diseases,	689,	"	"	"	8.6
Making a total of	3,643.	"	"	"	45.5
In 1866, from August 10 to September 10,					
From Cholera,	2,886,	or per	1000	inhabitants,	14.4
From other diseases,	908,	"	"	"	4.5.
		"	"	"	
Making a total of	3,794,	"	"	"	18.9

Therefore, from these tables it is evident that the absolute mortality in both corresponding periods was about equal; but, as in 1849 the population was only 80,000, and in 1866 was 200,000, being two and one half times as large, the mortality in the last year was two and a half times less than in 1849.

Another result is, that in 1849 the largest number of deaths, 944, or nearly 12 per 1000 of the population, occurred in the week ending July 2; while in 1866, the greatest mortality took place in the week ending August 24, amounting to 1,259, or not much more than 6 per 1000 of the inhabitants.

Those that were reported to have died of other diseases than cholera, in the eight weeks, amounted, in 1849, to almost 18 to the 1000 inhabitants, and in 1866 to only 7½ per 1000, being less than one-half as much. Does this discrepancy indicate that our city is not much healthier than it was seventeen years ago, or does it speak against the correctness of the cemetery certificates in 1849, where possibly a large number of cholera or allied cases were reported under other heads, while now the certificates seem to be more accurate. It is probable that both causes operated to produce that result.

I believe that it can be shown that our city is now one of the healthiest in the Union, and that while from fifteen to twenty-five years ago the average mortality, aside from cholera, was about 35 per 1000, or 1 in 29, per annum, it amounts now to not more than 59 per 1000, or one in nearly 35 inhabitants. Though we may not have reached the good time indicated in the last

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number of the *Reporter*, in which only 1 in 40 was taken off, there is, however, no doubt that such a consummation, devoutly to be wished for, can and will be obtained when the Sanitary Boards, Commissioners and measures so invitingly held out will have their beneficial sway.

A FEW REMARKS ON THE DANGERS OF CHLOROFORM.

By J. S. B. Allevne, M. D.

[Communicated for the St. Louis Medical Reporter.]

The announcement in the last number of the New York *Medical Record* of another fatal case from the administration of chloroform, and occurring under the supervision of that skillful surgeon, Professor Hamilton, is well calculated to intimidate the boldest in the very general use of this anæsthetic, or else arouse more thoroughly the energies of the profession to ascertain how this danger may be avoided, how to separate the evil, which, at present, seems intimately attached to the highest boon ever granted to man. For ourselves, we have never witnessed any fatal result from the use of chloroform. We have seen, however, and heard of several instances here, where the most lively apprehensions have been aroused for the safety of the patient; and whilst having occasional opportunities for its use, and not hesitating to prevent suffering by resorting to anæsthesia, we yet have constantly before our mind the untoward results. Thus far, we know nothing of the mode of action of chloroform; whether we compare anæsthesia to asphyxia (though the comparison will not bear close inspection), or whether, as we say of most medicines, that its action is vital or dynamical—meaning nothing more thereby than its absorption, with probable change upon the blood, but ultimate and elective action upon the nervous system. Certain it is that we can not go much farther in explanation, unless we consider as such the modes of death by this agent, such as syncope, asphyxia or coma. The list of deaths by chloroform inhalation does not look so large

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when we call to mind the innumerable instances where it is used with success. The report made to the Royal Medical and Surgical Society on the subject of chloroform has collected one hundred and nine cases, to which may be added two or three more occurring since that time. If we could know how often this remedy were administered, then we might form some just idea of the relative frequency of death This will probably be always difficult to ascertain, so much is chloroform used by the unskilled as well as the skilled. Accidents may happen to the best, though not so often as to those who are always using it on every occasion, and unsparingly. It is remarkable that we hear of so many unfortunate cases where operations of minor importance have been performed; and on the other hand, in our hospitals, or in private practice, or after battles, where the capital operations of surgery are frequent, but very few, if any, untoward results have followed. There certainly seem to be classes of patients who are exempt from the injurious influence of chloroform. Women in childbed, or in general women, children, those debilitated from disease, have enjoyed an immunity which is surprising, while our first experience teaches us that these, above all, are most susceptible to the action of medicines. On the contrary, it is among those of full life and health where the accidents have most often happened.

It, however, must not be supposed that every death during the inhalation of chloroform is the result of this. Of course, the disease or the operation may often go far in accounting for it. It is in the experience of every physician, not to say surgeon, to have witnessed the impression made upon the nervous system by causes even the most trifling; and instances will occur to all of death resulting from an overwrought mind where an operation to be performed was on the point of commencing. It is difficult to separate such causes, and to give to them their true value, at the time of the inhalation, and the physician himself may attribute to the chloroform what in part depended upon the condition of the nervous system. Further observations may

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clear away these difficulties, but at present we must be content to proceed cautiously and prudently.

It seems to us that chloroform, or, indeed, any anæsthetic, should never be administered but by one who has much experience. Anæsthesia is so common at the present day, that we would think, provided it was attained, it mattered little how or by what quantity of the anæsthetic it was reached. How often have we witnessed the administration of chloroform by a medical student to a resisting patient. If a little time elapse, and the result is not arrived at, in the impatience of the moment, an excessive quantity is given, and at once the patient is in profound slumber, or rather in a condition approaching coma. Does this condition, so suddenly reached, not strike the observer with fear? Is there not some danger in reaching the point too quickly? While we believe that the patient should be completely under the influence of the anæsthetic before an operation is commenced, and that as well for the surgeon as patient, yet the end should be arrived at slowly; sufficient time and patience should be used.

Is it not often the fault of the administrator, rather than the agent used, that accidents happen? Like as with the most virulent poisons, the skilled physician will use them with benefit to his patient, where the ignorant man will destroy life. An overwhelmnig dose of chloroform, as of strychnine, will create such an impression upon the nervous system, though, of course, not acting in the same way, as at once nature succumbs. We repeat, that in the administration of anæsthetics as much experience should guide us as in the use of other medicines; that to the mal-administration, whether as to quantity, and this particularly, or in the mode, very frequently we may attribute the unfortunate results. The medicine is not to blame, but we ourselves. And, therefore, with our exceeding care and attention to children, to women, to those enfeebled by disease, in the administration of chloroform we meet with but very few accidents. On the other hand, in the unsparing and bold manner in which

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it has been given in the operations of minor surgery we find often most the misbaps.

Twenty years have gained for us much valuable knowledge of anæsthetic agents, not only as to their proper use, but also as to the number of them. It is in the memory of most practitioners of a few years' standing how bitterly opposed was a large majority of the profession to the use of such agents; some not believing in the possibility of destroying pain, others thinking it possible, but contrary to Divine laws. As we have gained much, so unquestionably shall we gain more. Within a very short time, Dr. Richardson, of London, has immortalized his name by the introduction of local anæsthesia. Even since his discovery numerous remedies for the local abatement of pain have been brought to light. May we not hope that in this innovation we see the way of avoiding the terrible daagers which have attended, till now, general anæsthesia?

Certainly, in minor operations, local anæsthesia can and should always be used. If not sufficient in capital operations, at least we are advancing so rapidly, that who can tell but very soon we may look upon anæsthesia without dread, for we shall have secured from it the good alone, leaving all danger behind.

NOTES ON SOME POINTS IN THE ADMINISTRATION OF CHLOROFORM.

By John Smith, M. D., F. R. C. S., Surgeon-Dentist to the Royal Infirmary, etc.
Read before the Medico-Chirugical Society, London.

On a late occasion, when there was communicated the account of a death supervening on the induction of anæsthesia, it occurred to me that instead of making any remarks at the time, I might take an opportunity of putting together a few notes on some points in the administration of chloroform, more especially as connected with such minor operations as those on the mouth, and laying them before the Society at a subsequent meeting.

In doing so now, I would briefly advert to three circumstances appearing more prominently to present themselves for consideration in cases of this kind. These are:

1st. The locality and nature of the operation to be performed.

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2d. The amount of chloroform administered, or rather the degree of narcotism induced.

3d. The peculiarities of those cases where a fatal result has taken place.

It is unnecessary here to say that the tolerance of anæsthesia from chloroform is so universal, and the comparative exemption from its imputed risks so well established, by the confidence and success with which they are ordinarily encountered, that the accession of any really serious symptom in its use may be considered as a rare exception to the general rule; and I would premise, that any remarks now advanced are in no way animadverting on the recent case alluded to, and already communicated to the Society—a case in which the experience and resources of the operator are only confirmatory of how little avail, in circumstances of the kind, are any known remedial measures.

First, with regard to the locality and nature of the operation: So far back as in 1858, in a paper published in the *Medical Journal* for November of that year, I drew attention to the fact, that in perhaps no other operations have the circumstances of the case more to be taken into account during the induction of anæsthesia than in those performed within the cavity of the mouth. The locality itself, the severe pain sometimes necessarily inflicted, the peculiar intensity and persistence of the sensory powers of the fifth pair, the rapid and simple nature of such operations as tooth-extraction in proportion to the deep state of anæsthesia demanded, and, the complications attendant on the interference, here sometimes unavoidable, with the functions of deglutition and of respiration—all tend to embarass the operator and increase the patient's risk.

Apart from mere difficulties, the danger most directly to be apprehended here is that of asphyxia. With the mouth open, be it ever so slightly, deglutition is prevented. An accumulation of saliva or blood, or both, thus frequently in these operations collects over the upper part of the larynx, interfering with the admission of air. Under other circumstances, by pulling forward the tongue by means of a hook or artery forceps, the danger of suffocation may, when it occurs from the mere position of parts, be so far averted, by thus at once both mechanically opening, and, as Professor Lister has shown, physiologically exciting, retraction of those structures impeding respiration. Where, however, a quantity of fluid is lodged here, its entrance, along with or in place of air, during a deep state of unconsciousness, where even the coughing up of such matters seems suspended, instead of tending to diminish would increase the danger. We may, however, here supplement the pulling forward of the tongue by taking the precaution of first clearing out the fauces; and as this can be done by the finger, covered with a

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piece of lint or the corner of a napkin, so at the same time, and by the same means, the pharyngeal muscles may be excited to action, and the base of the tongue moved forward rendering the larynx patent, as in the other mode.

It will be seen, however, that the danger here is, to a great extent, avoidable, and that the main and all important indication furnished in these operations, is to prevent, as much as possible, any such accumulation of fluid at all, by interfering as little as we can with deglutition. Deglutition is unimpaired far on in anæsthesia; and as the first inhalations of chloroform excite its occurrence as well as increase the flow of saliva, it is obvious that, in placing at this early period—whatever may be done during the actual performance of the operation—anything between the jaws so as to keep the mouth open, by impeding this function, there is incurred unnecessary risk. There is only one other remark I would make in this place; it is, that the respiratory movements should not be forced or augmented in any way while inhaling chloroform, as such a practice is invariably followed by a lull or cessation of the respirations, which is always to be regarded with anxiety.

Associated with the administration of chloroform, there is another familiar source of danger besides asphyxia—namely, the accession of syncope. The causes of this complication seem divisible into those of an avoidable and those of an unavoidable nature. And such causes as appear avoidable will be found to attach more to minor than to major operations. In this, the avoidable class of cases, syncope is not produced by, but occurs simply during anæsthesia; thus differing from another class, where, from unavoidable causes, the anæsthetic becomes so far, at least, an accessory to the occurrence of fainting.

The Society may recollect that, at the last meeting of last session, I submitted a short notice on the propriety of recognizing the probably greater tendency to syncope induced by any undue reclination of the head, s occasioning pressure on the vessels of the neck Again, whether from this or any other cause, syncope during anæsthesia, as at all other times, is most apt to occur when the patient is in the upright or semi-upright position; and it need scarcely be here said that, in order to diminish the chances of a complication so serious, the horizontal posture should in all cases be the one adopted during the exhibition of chloroform. Such, however, is far from being the position generally chosen for minor operations. The preponderance of these operations of death, associated with chloroform, is no doubt attributable, in a great measure, to a contrary practice, it being very generally considered not worth while in such cases to make a patient lie down. The Medico-Chirurgical Society of London, on the other hand, in their report on chloroform, show

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that the statistics of 2586 *capital* operations performed before the introduction of chloroform, and 1800 performed under its influence, exhibit no increased mortality arising from anæsthesia, such operations, it may be assumed, being always performed in the *horizontal* posture.

Another circumstance favorable to the accession of syncope in these, and indeed in minor operations generally, lies in the small quantity of chloroform administered, and the imperfect degree of anæsthesia induced. Too frequently in such operations the attendant is an unqualified practitioner, who, in employing an agent of the kind, feels beyond his province. A mere whiff or driblet is in consequence made to answer the purpose. This seems, however, a practice fraught with danger. In all cases anæsthesia, to be either satisfactory or safe, should be complete. I have repeatedly noticed patients, who have had chloroform on different occasions for such operations as came under my own department, express themselves as much less uneasy after a full dose—much less exhausted; and I may mention my own personal experience of this agent to bear out such a statement. So far it is more satisfactory; but it is also more safe. We know that one of the benefits of anæsthesia is the prevention of shock during an operation. We know also that shock tends to interfere with the heart's contractions, by the influence of the cerebro-spinal system on the cardiac ganglia through the par vagum. And this tendency does not always depend on the magnitude or importance of the operation. The operation may be a minor one, and the suffering inflicted very slight. The patient may be unconscious of pain, and yet the heart may, through the ganglionic system, be affected by the operation, and syncope result. Cases are recorded (article "Anæsthesia" in Holmes' Surgery) where, during anæsthesia, the pulse fell with the first incisions in an operation. There can be no reasonable doubt that, of two patients equally under chloroform, if one be operated on in any way worthy of the term, and the other not, although neither have actually experienced pain, yet the one wakens up in a very different condition from the other—the one has suffered more or less from shock, the other has not. I am persuaded I have seen patients during anæsthesia in this way faint immediately on a tooth's extraction. Even in another variety of critical cases, where the spasmodic action, sometimes manifesting itself in the voluntary muscles, is possibly extended to the heart, the exhibition of a further quantity of the anæsthetic, if practicable, would, judging from analogy, certainly be the indication here to be fulfilled. Whatever other danger, then, may be incurred by a free use of chloroform, there seems every reason for believing that the more imperfect the anæsthetic state, the more risk there is of fainting; or, conversely, the more chloroform the less shock.

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After a very large dose of chloroform, no doubt, the action of the heart has been shown (Med.-Chir. Reports, *Lancet*, 1864, etc., etc.) to become diminished in force and frequency. But nearly all the deaths that have occurred, it must be remembered, have taken place, not at this later stage, but at the commencement of anæsthesia, when we know that both the force and frequency of the heart's action are increased. In certain low types of febrile diseases, the pulse improves under chloroform, and remains steadily more full and even less frequent during the state of complete anæsthesia. For a considerable time back I have found chloroform to answer in a similar manner in place of the ordinary ammonia or smelling-salts, in cases of threatened syncope. And even in the experiments of Mr. Wakely and of the Society of Emulation of Paris, in 1855, where animals were purposely killed by this agent, it was found that the heart did not cease for some time after the respiration had become suspended. There, therefore, seems little doubt that any depressing effect of chloroform in ordinary cases could act as pointed out by Caspar only after time has been allowed for its neuro-paralyzing effect both on the sensory and motive nerves, and through them on the muscles, including the hollow muscles, such as the heart. But where insufficient anæsthesia is induced, we may expect untoward complications—such as incidental syncope, suffocative spasm from hysteria, etc. And where these do occur during semi-unconsciousness from chloroform, both their effects and that of the agent itself are rendered doubly dangerous.

In making such statements on what may be considered *avoidable* sources of danger during chloroformization, it is by no means disputed that sudden deaths have occurred apart from any causes of the kind. But the question next presents itself, Do any peculiarities exist in the latter class of cases to account for their occurrence? That there does exist some given condition, modifying the action of chloroform in such anomalous cases, seems self-evident; and as chloroform acts through its influence on the nervous system, it seems to be *there* that such modifying conditions must be looked for.

The most probable cause of death, where its occurrence under anæsthesia has been unavoidable, would appear to be some disturbance in the reflex excitability of the nervous centers, affecting the heart. This may originate in a variety of ways in different instances. In many, the previous circumstances of the case, such as the prolonged existence of suffering, may lead to a condition of the nervous centers in which reflex excitability would be diminished; and, as it has been admitted that chloroform and other anæsthetics in their advanced stages produce and consequently would tend to increase the state, we can

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conceive, on their employment in patients already reduced in this way, that various functional nervous affections may be produced. Again, natural difference of excitability of some parts of the nerve centers may exist in different persons, so that the reflex movements of organic life, such as those of the heart, are liable to be variously affected by the same cause This is well known to be the case with the heart's action in different individuals. But as any *natural* modification of excitability in this organ would be more or less permanent, it would fail to explain deaths occurring under anæsthesia in patients who have at other times been anæsthetized with impunity.

Besides the influence of disease and of natural constitution on reflex excitability, we know that it may also be altered by artificial means, such as by various remedial or poisonous agents. To this, however, little importance attaches, unless, indeed, it be that, taking into account this fact, we may, perhaps, yet find some means of preparing, so to speak, the reflex excitability of the nerve-centers so far against the effect of any one, by the preliminary exhibition of another agent of an opposite tendency.

In this way, then, there seems no difficulty in imagining such causes as natural constitution, previous illness, or artificial agents, impairing or altering the excitability of the nerve-centers in different individuals, and thus leading to diminished reflex action—a condition which such anæsthetics as chloroform would, as a general rule, seriously aggravate.

It does not follow, however, that the same reflex condition should in every one predispose to the same consequences. In fatal cases it would seem as if this result were sometimes the very first phenomenon exhibited as an effect of the chloroform. This may arise from the fact that its action may be limited to one set of functions alone. If, according to recent research, (Brown-Sequard, *Lancet*, 6th Jan., 1866) the nervous conductors of sensitive impressions and reflex phenomena, as well as for the transmission of nervous force to the muscles, blood vessels, etc., are absolutely distinct from one another as regards their function, it may be assumed that one set of functions may be exclusively and suddenly interfered with before or without the others being affected at all; for example, before anæsthesia has commenced, as in cases where at an early period the disturbance seems limited to the heart's action, one set of nervous functions being thus exclusively affected. And there is no necessity that even in similar cases, such as where the state of nervous exhaustion appears equally great, the same cause should produce the same effect. According to the view that the *same* peripheric cause of irritation, acting through the *same* centripetal nerves, may produce very various effects, including every functional

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nervous affection or disorder, we can easily conceive the heart affected in one patient by an agent such as chloroform which might not produce the same effect on another in similar circumstances, or even on the same individual at a different time—on the same principle as in the example of cold applied to the surface producing various morbid results.

In these and other modes, then, death may occur as a contingency associated with anæsthesia in a manner altogether unavoidable, and in which no foresight could avail. But while admitting the conclusion deducible from such data to be, that chloroform may, according to previous and uncontrollable circumstances, exceptionally increase or diminish, or it may be, in rare instances, arrest the heart's action, we must not overlook the fact that in such cases the chloroform has not acted independently, but only as an accessory agent among others; nor must we forget that the same conditions of the nerve-centers predispose in precisely the same manner to accidents from the operation as the disease itself for which the chloroform is required. We know that sudden death has occurred immediately before and during the simplest operations without anæsthesia at all; and we are bound to suppose that at least some of the deaths attributed to chloroform are of the same nature.

In the account of the post mortem examinations of those cases where death has taken place during anæsthesia, the want of uniformity in the appearances presented renders it unlikely that the result in all proceeded from one and the same cause. There is wanting in them that uniformity which occurs in poisoning by any given agent. Indeed, it seems questionable whether in the human subject death has been in any case a purely toxicological effect of chloroform. That it is quite possible to kill an animal by the simple accumulation of chloroform in the system acting as a poison has been frequently demonstrated. In man, however, we know that, in almost every fatal case, scarcely any accumulation whatever of chloroform could exist; while in many cases, where no poisonous effect whatever was produced, large and prolonged doses of the agent had been administered, and its effects maintained, not only for hours but sometimes for days consecutively, without any impairment, but with positive improvement, of the general health.

The records of post-mortem appearances, as has been said, exhibit the utmost discrepancy. In the fifty cases collected by the late Dr. Snow, the condition of the heart was very various. In nearly twenty it was either gorged or tolerably filled with blood. In others it was empty but stained with blood, showing that probably it had been emptied only at the post-mortem examination. Dr. Berend, of Hanover, details among others ten cases, in all of which the heart was empty, flaccid, collapsed

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and doubled upon itself. In other cases from time to time recorded, as in that last read before the Society, the heart was firmly contracted. In many it was diseased, and in not a few the cause of death was found in some other organ altogether, such as the spinal cord.

Again, the opinions as to the mode of death are not less various. Dr. Sibson, in 1848, attributed the fatal result to death of the heart; Dr. Snow, to what he termed cardiac syncope; Dr. Black, to asphyxia; Caspar, to neuro-paralysis; Sanson, to both syncope, and asphyxia, etc. A conflicting mass of evidence, from which it appears impossible to derive any other conclusion than that the deaths described were due to no one cause, but had been produced in a manner widely different, according to the circumstances of the case.

As the general import of these notes, then, I would wish to show that while we find deaths associated with chloroform naturally separating themselves into the two distinct divisions of those arising from avoidable and those due to unavoidable causes, the avoidable causes are numerous and varied, while the unavoidable are of a range very limited, if not invariable in their nature. The former class tells, of course, not so much against the administration as the administrator of this agent. The remainder forms an interesting series, probably all belonging to cases whose condition, altogether apart from anæsthesia, was unsuspectedly near to death, and where the chloroform acted merely as the touchstone of their hold on life. So far as we know of its effects as a toxic agent, such of the unavoidable deaths in man as have been recorded can not be determined as necessarily essential to chloroform, but rather as the result of certain morbid conditions in which death is apt in an exceptional manner to supervene on the influence of any disturbing cause affecting certain already disordered functions of the nervous system.—*Edinburgh Medical Journal.*

FACE PRESENTATION IN THE MENTO-POSTERIOR POSITION.

With Remarks upon the Treatment and the Mechanics of a Case. By Stephen Rogers, M. D.

The following history will, I presume, be of practical interest, relating as it does to the management of one of those unusual face presentations, of which Churchill says, that Smillie, and other of the older writers, speak as possible to be delivered, but that, in his opinion, "a moment's examination will show that this is mechanically impossible." He, therefore, distinctly declares his disbelief in the accounts of those writers who describe

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successful deliveries of cases wherein the head "emerged from the lower outlet with the chin toward the perineum."

Cazeaux also says that delivery, at term, in this position, is impossible, and speaks of the conditions of this presentation as "constituting one of the most serious difficulties of the obstetric art."

The most modern summary of our knowledge upon this subject, I find in a paper read before the Obstetrical Society of London, in 1865, by Dr. Braxton Hicks, upon Face Presentation in the Mento-Posterior Position. It reads as follows:

"Although, in a majority of cases, the chin rotates forward during the descent, in face presentations, whatever was the position it occupied originally, yet in some rare cases the chin passes through the outlet obliquely, while in others the rotation can not be accomplished at all, either by nature or art. Under these circumstances, in some very rare instances, delivery takes place spontaneously, though the greater number of this rare class require the use of the forceps, by the means of which, either the chin over the perineum, or the vertex beneath the arch of the pubes, might appear first."

Dr. Barnes, the President of the Society, remarked on that occasion, that inasmuch as Dr. Hicks had, by the aid of the forceps, accomplished the delivery of a living child in this position, he thought it "probable that the pelvis was large in proportion," and added that "in cases of due relation of pelvis and child, birth with the chin posteriorly was almost impossible; for in proportion as the face descended, there was a rapidly widening base of a wedge, formed by the occiput bent back upon the child's trunk, which could not pass the pelvis."

Mrs. ——, multipara, aged about 30, having passed several confinements without difficulty, had, out of motives of economy, employed a midwife to attend her on this occasion. After suffering the pains of labour for about twenty-four hours, without any prospect of their termination, she was persuaded by friends to send for me, though the midwife assured her that it was only a "dry labour," and would terminate favorably in time. I found the patient suffering frequent and exhausting pains, with a countenance expressive of the agonies of desperation; the pulse about 120, and the external genitals hot, and rather dry.

A careful digital examination satisfied me that the anterior fontanelle was behind and to the left of the symphisis pubis, and that the chin was low down over the right sacro-iliac synchondrosis. Placing the woman upon her knees and elbows, I endeavored, during the intervals of the pains, by introducing my outstretched fingers under the face and chin, to raise the head up out of the pelvis, with a view of bringing down the occiput by external counter-pressure, and thus convert it into a first

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cephalic presentation. This effort, however, was fruitless, owing to the resistance of the sensitive and irritable uterus. So far as could be ascertained, this condition of things had existed the better part of twelve hours without any perceptible change. The uterine contractions had wedged the head and upper thorax down into the pelvis to the utmost degree of pressure, and had extinguished all signs of fœtal life.

Without delay I called Dr. Wm. M. Chamberlain to my assistance and counsel. A careful examination enabled him to confirm the diagnosis, and he at once approved the proposition to convert the presentation into a first occipito-anterior, by the method presently to be described, and then to wait for the uterus to accomplish the delivery. The patient was then placed upon her back crosswise of the bed, with her feet resting upon chairs, in the position usually chosen for the employment of the forceps, and Dr. Chamberlain administered chloroform to profound anæsthesia. I then introduced the open right hand along the posterior wall of the vagina till the fingers reached the chin, and then, to give greater mechanical advantage, the hand was closed, and the second row of phalanges and carpal portion of the palm placed against the chin, and mouth, and face of the child, and firm continuous upward pressure maintained by it, for a period of several minutes, with the result of raising the impacted head so far out of the pelvic cavity that external counter-pressure with the left hand upon the occiput, now felt prominent above the pubes, threw the posterior portion of the head down on to the brim of the pelvis, thus converting it into a vertex presentation. To the best of my judgment, I should say that the chin had reached to within about an inch of the level of the upper strait before the external counter-pressure was employed. This external downward pressure upon the occiput, which effected the final change of presentation, was very moderate indeed; showing that the head must have been well nigh out of the pelvis. Fearing a return of the head to its mal-position, I maintained moderate pressure over the super-pubic region, had the patient placed in bed, and suspended the chloroform. Consciousness returned in about the usual time, and with it the uterine contractions; the head advanced rapidly in the *second vertex* position, and the labour was accomplished in a prompt, easy, and in all respects normal manner, in about half an hour. Still further in evidence that the head must have been about out of the pelvis before its rotation took place, is the fact that it was also turned laterally from one acetabular region to the opposite one, becoming a second vertex presentation instead of the first, as it would have been if it had remained in the direction of the original position.

It may be well to state that this is an operative procedure

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requiring first-class muscular endurance, quite as much as any obstetrical operation with which I am acquainted, and I doubt if it can be accomplished without the relaxing and quieting influence of deep anæsthesia. In this case, all paroxysmal muscular resistance on the part of the uterus was perfectly controlled by the chloroform, nor did the pains return till its influence had nearly entirely passed off. The child was full size, estimated to weigh between nine and ten pounds; and there was, therefore, every reason to believe that Nature had exhausted her resources and strength in futile efforts to force it through the pelvis. The amount of tumor above the pubes, and the degree of impaction in an oblique position of the head in this case, convince me that Dr. Hodge's suggestion of rotation in the pelvis was entirely impracticable; and as to any lateral movements, with the view of bringing the chin around under the pubes, Dr. Chamberlain agrees with me, that they also were utterly impracticable. The choice, then, lay between the violent delivery by forceps—which I apprehended would also have been impracticable—craniotomy, and the proceeding which was practiced; and I leave the profession to decide upon the respective advantages and merits of the three.

Had this proceeding been adopted early in the labour, there can be no reasonable doubt that the child would have been saved, for it is not one which inflicts any violence upon any vital part of the child; and even the force necessary to effect the rotation would be trifling in the early stages of the labour, when compared with the impacted state of the head in this case.

Whether the uterus would be always relaxed and quieted by the chloroform or any other anæsthetic, as it was in this case, may be a matter of well founded doubt; but, in my compartively limited experience, I have always seen uterine action totally suspended by *deep anæsthesia.*

Another fact in this case points to a mechanical impossibility of delivery, viz.: the prompt and easy delivery as soon as the presentation was corrected. A shoulder presentation could not have afforded a more striking contrast and change to the possible. The opposing circumstances of force and resistance to which this fœtus was exposed during the prolonged uterine efforts to deliver, may be comprehended by signs upon the cadaver, which Dr. Chamberlain discovered and called my attention to. The neck had been so stretched and bent backward, that the integument covering the prominence of the thyroid region had given way, producing a considerable laceration in a transverse direction, and the sterno-cleido-mastoid muscles were so stretched as to be apparently destroyed; and, indeed, the whole neck had the appearance of being very considerably elongated. The upper chest of the child, meeting with resistance at the brim of

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the pelvis, thus arresting the progress of the body, the adaptability of the head to the shape and size of the pelvic passage, would, as a consequence, throw most of the expulsive force upon it, *elongate it, and push it forward.* The degree of elongation, and the distance to which it would be pushed, must be entirely controlled by the resistance, which, in this case, was *through the neck.* I have not the least doubt, therefore, that had the neck been severed, delivery would have been accomplished by the uterine efforts alone, first of the head, secondly of the body of the child.

The woman recovered with remarkable rapidity, and without an untoward symptom, and on the fourth day was found walking about her room.—*Medical Record.*

SPIRITS OF TURPENTINE AS A TRUMATIC REMEDY.

By U. R. Milner, M. D., of Jefferson City, La.

Spirits of Turpentine, as an internal remedy, is so well known and so well appreciated by the profession, that to write anything commendatory of it, in this particular, would be superfluous; but as an external application to wounds, I am of opinion, that its virtues to prevent inflammation and maintain healthy action are not, if generally known, sufficiently appreciated.

The fact that it does, sometimes, when applied to the healthy skin irritate it, and occasionally causes an inflammatory and painful eruption, has, no doubt, prevented its general use as a local agent. But this inflammatory action is the exception and not the rule. As a rule of action, spirits of turpentine, like chloroform, inflames only when the air is excluded. Some persons have a peculiar idiosyncrasy that will not bear it; but I have only met, in a long and extensive practice, with very few such cases.

It has been my practice for years to apply the spirits of turpentine freely to all contused wounds, and even to cuts that would not heal by the first intention, and I never have had a case of serious inflammation, or in any wise an unhealthy wound, with this practice. Again, I have long been impressed with the idea that the spirits of turpentine dressing to contused wounds is a prophylactic against traumatic tetanus. The opinion is *not yet* substantiated by any known facts sufficient to make it a precept; but I have never known a case of traumatic tetanus where the spirits of turpentine had been used, and I never feel content to cure a pricked or contused wound without it.

Cold water dressings are universally and deservedly popular; but during my service in the late war as surgeon in the Confed-

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erate States army, I frequently saw cases where it had been injudiciously used to the great detriment of the patient, depressing the vital forces, resulting, at one time, in gangrene, at another in sloughing of the tissues, and again a fatal collapse might have been traced to it; but I must say that where the spirits of turpentine was used, either alone or in connection with water dressings, I never saw a case of gangrene or sloughing. A few cases are appended to show more forcibly its safety and efficiency:

Case 1. Mr Sexton, aged about forty years, was brought home to Selma, Alabama, and placed under my care, about the first of November, 1864, from Augusta, Georgia, where he had been confined five or six months on account of the amputation of his thigh at the lower third.

Condition.—His healthy weight had been 130 pounds; his weight at this time was about sixty or seventy pounds; bone protuding two and a half inches; a large abscess on the internal aspect of the thigh, filling the space internally of its upper third; constitutional symptoms corresponding; assisted by my friends surgeons Billisolly, Alexander Hart, Curry and Johnson, I performed the flap operation at the commencement of the middle third, and then plunged the bistoury into the abscess, liberating a pint or more of exceedingly offensive matter. A properly adjusted bandage compressing the sinus of the abscess; daily ablution with warm water, the application freely of the spirits of turpentine, with a sustaining treatment, succeeded without any farther unhealthy action whatever, and in eighteen days the limb was so nearly healed as not to require the surgeon's visits; and, the gentleman, in the smooth current of uninterrupted progress, recovered perfect health with a beautiful and well-cusioned stump.

Case 2. A son of Mr. Duvernay, of this city, got his foot caught under the wheel of one of the city cars, September 9, 1865. The integument was torn open from the external malleolous of the right ankle to the second phalanx of the big toe, and laid off on each side nearly to the bottom of the foot. The tendons and muscles of the foot were all contused. The integument was brought up and stitched; a thin dressing of simple cerate was laid upon the wound to prevent the bandage from sticking; and the bandage on the foot was saturated three or four times a day with the spirits of turpentine. No other dressing was used. Altho' this boy had, during his confinement, two attacks of chill and fever, no inflammation ensued; and this extensive wound was perfectly healed by healthy granulation in thirty days.

Case 3. A boy got his hand caught in the machinery of a factory; the fingers were all lacerated, and the bones of the middle and ring fingers were so comminuted as to require their ampu-

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tation. This boy was cured in twenty days with the spirits of turpentine dressing without any inflammation.

Case 4. With the assistance of my friend, Dr. Hughes, of this city, I removed, about the first of June last, two and a half inches in length by two-thirds of its diameter, the necrosed tibia of an old woman, in order to cure an old sore of six years standing, which was so offensive as to make her life a burden. A sustaining treatment, a disinfectant, and spirits of turpentine dressings have been the means of restoring this old woman to health and happiness. A healthy granulation sprung up at once, and no inflammation ensued during the treatment.

Case 5. June 23, 1865, Mr. Landry, a carpenter, cut the extensor tendons of his thumb with a hatchet, and also the radial artery. I tied the artery at the point of division, stitched the wound, bandaged it, and directed cold water. At the next dressing on the next day, I commenced the spirits of turpentine. About the third day a slight inflammation set up; cold water was applied, and the turpentine continued. The inflammatory action subsided in about twenty-four hours, and from this time nothing but the turpentine and a little grease to keep the bandage from sticking was used. On the seventh day the ligature was removed, and in ten days more the gentleman went to work. He grips well with the injured thumb, but has to use the other hand to make it let go, a defect which nature will very nearly correct.

Remark.—It is a notorious fact that men are prone to extremes. In politics and in religion—in every branch of science, and in every new idea or discovery we find this tendency; and oftentimes truth itself is borne with so much impetuosity upon the current of popular feeling as to be lost in the tumult! But sometimes a good thing is very much neglected.—*Southern Journal of Medical Sciences.*

POISON BY STRYCHNIA—RECOVERY.

By Julien S. Sherman, M. D., Chicago.

The frequent fatal results of poisonous amounts of strychnia taken into the stomach, render the treatment of those which recover of considerable interest. The following case occurred on February 7:

Charles W., a resident of Chicago, *æt.* 23 years, of more than usual muscular development, desiring to "shuffle off this mortal coil," procured two grains of strychnia at 9 o'clock in the morning, and immediately deposited the same in his stomach. I was called to see him at 10 o'clock, and learned that he had suddenly

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fallen to the floor, complaining of inability to move his limbs, while his whole muscular system was in a state of tremor. The characteristic symptoms of poisoning from strychnia were now present. The spasms were frequent, and the rigidity of the cervical muscles marked. He complained of a sense of constriction in the fauces, and at times could only with difficulty swallow. The extremities were cool, and the mouth filled with frothy saliva. Pulse 115 to the minute; countenance extremely anxious.

An emetic of sulphate of zinc and ipecac was immediately given and soon repeated, when free emesis was produced. A mixture of equal parts of tinct. cannabis indica and tinct. of camphor was given in drachm doses every 10 minutes; chloroform, by inhalation, was used for the first half hour, when it was omitted, and the mixture alone given.

The convulsions, at first, were as frequent as once every 10 minutes, and similar to the action produced by an electric shock. At 11½ o'clock they were greatly reduced in frequency, and the remedy was given at longer intervals. The symptoms soon became worse, and the dose was increased. They were again controlled, and gradually ceased entirely. By 11 o'clock at night the patient was sleeping, and the next morning complained of extreme exhaustion, with general muscular soreness. Tonics and a nutritious diet soon completed his recovery. During the twelve hours of treatment, nearly four ounces of the mixture was given, and yet none of the symptoms of intoxication from cannabis indica were developed.

RUPTURE OF THE TRICUSPID VALVES OF THE HEART FROM FRIGHT—DEATH.

By Alfred Hitchcock, M. D., Fitchburg.

The subject, Mabel H., aged two years and nine months, child of John S. Ray, of this town, was uncommonly fleshy, of a sanguine and very nervous temperament; the intellect and affections being somewhat precociously developed. The child had been many times frightened by fire alarms, and was often nervously excited by loud noises and other sudden and unusual causes. In the middle of the night of July 1, 1865, the steam fire whistle sounded an alarm suddenly, and somewhat protracted, in the immediate vicinity of the grand-mother's residence, with whom the child was then stopping. It awoke in terror, screaming and panting for breath, with suffocating paroxysms. It was several hours before a moderate degree of quiet could be restored; towards morning, however, the child

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slept a little, but the breathing was labored and the skin somewhat livid. Spontaneous vomiting occurred soon after the injury, and was many times repeated before death. Vomiting did not relieve the dyspnœa. During the 17th and 18th, the dyspnœa continued, varying in severity, but constantly increasing the suspicion of some very grave mechanical lesion. The radial pulse was much of the time absent or too feeble and irregular to be counted, and the sounds of the heart were either too feeble to be heard or too irregular and tumultuous to be in any manner identified. There was loud and moist bronchial and tracheal rattle, so as sometimes to suggest the presence of some foreign body in the respiratory passages. The weight of evidence, however, during life, as derived from the vomiting, the pulselessness, the lividity and dyspnœa warranted the expression of a belief that some mechanical obstruction existed at the cardiac valves. This theory of the case strongly impressed itself on my mind, from the fact of having within a few years seen two cases of death from polypi plugging up the right auriculo-ventricular passage, each of which was attended by the same phenomena manifested in this case. The child died seventy-eight hours after the fright.

Dr. George D. Colony assisted me in the post-mortem examination. The right auriculo-ventricular valves of the heart were lacerated and broken in their substance; also, several of the *carneæ columnæ* and *chordae tendsneae*, and the endocardiac serous membrane in the vicinity was ecchymosed and elevated by the infiltration of blood underneath and around the points of ruptured tissue. The right auricle and ventricle, by the destruction of the tricuspid valves, became one continous distended pouch which contained a small quantity of coagula. This change in the cavities and mechanical relation of the heart's propelling power, of necessity created a fatal inability in the right ventricle to impel the blood to the lungs sufficient to sustain life for any considerable time. The lungs showed venous congestion. No other morbid appearances were found in any of the viscera.—*Boston Medical and Surgical Journal.*

The System of Wet-Nursing in France.—The Academy of Medicine of Paris is busy at the present time discussing this subject, and, from various sources, documents come in proving great neglect at the hands of the wet-nurses, and fearful mortality among the children. Remedies for this evil are proposed by various well-meaning persons; but no one speaks of the simple remedy of inducing mothers to give up the cruel custom (especially in large towns) of bundling off infants into the country when hardly born, and then forgetting everything about them. Why cannot French mothers nurse their offspring?—*London Lancet.*

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THE MEDICAL REPORTER.

ST. LOUIS, MARCH 15 1867.

Another Death from Chloroform.—The following account of an exceedingly interesting case, resulting in death from the inhalation of chloroform, we take from the New York *Herald.* It appears that on the 1st day of January, 1867, officer C. W. Heley, of the Eighth precinct Metropolitan police, brought to the Bellevue Hospital a woman, said to be Ann McGlenan, whose nose had been bitten off by a negro man in Laurens street; she was immediately examined and admitted by Dr. Charles H. Ludlam who ordered her to ward 18, third surgical division, and the surgeon to attend to her immediately. After the usual care she desired to have an artificial nose made, and while undergoing the operation under the influence of chloroform, died. The following is the testimony of Prof. F. H. Hamilton before the coroner, and gives the principal points of the case:

"Frank Hastings Hamilton, M. D., being duly sworn, deposed and said—I am one of the surgeons of Bellevue Hospital, Professor of the Principles of Surgery, Military Surgery, &c., in Bellevue Medical College; on the 1st day of January, 1867, the woman, Ann McGlenan, was admitted to Bellevue Hospital, having lost a large portion of her nose, said to have been bitten off by a negro in a brawl; upon examination it was decided that an operation for an artificial nose should be made; accordingly, on the 7th of January, in the presence of the class of Bellevue College, assembled in the amphitheatre of Bellevue Hospital, I had her placed completely under the influence of an anæsthetic, and made the operation by dissecting a portion of integument from the forehead and transferring it to the nose; no ill effects followed the use of the anæsthetic or the operation; the integuments united speedily and every circumstance proved a complete success; a few days later I constructed columna nasi and modelled more completely the top of the nose without using an anæsthetic; February 4, one month from the date of the operation, I proposed to complete the operative procedures by separating the pedicle by which the new nose remained attached to the forehead, and restoring to the position from which it had been removed, as is my custom in similar cases; at ten o'clock A. M. the

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patient walked into the amphitheatre accompanied by the female nurse, two house surgeons and myself, and was laid upon the operating table; her clothes were loose about her waist, and there was nothing about her neck; a blanket was thrown over her body and extremities, and I directed the house surgeons to give her first a little chloroform and then the ether; it is my almost uniform practice, when ether can be obtained, to give it alone as an anæsthetic, using chloroform for a few exceptional cases, and then giving it only in moderate quantity; this has been my practice and my teaching ever since the introduction of this latter agent, notwithstanding the opinions entertained by a large proportion of my professional brethren that chloroform may be given in entire safety; in army field practice, chloroform, as is well known, has hitherto been used almost exclusively; my reason for deviating from my own usual practice in this case was, that owing to the wound on the forehead and nose, the cone containing the ether could not be made to cover the entire face so as to exclude properly the atmospheric air without exposing those raw and sensitive surfaces to its vapor; the cone, made of a napkin folded diagonally, was six or eight inches in diameter at its open extremity, and, being applied only over the mouth, she would continue to inhale pure air through the nostrils and through the open and expanded wings of the cone; I believe that these circumstances would greatly delay, if not absolutely prevent, anæsthesia from ether; I left the room a moment to look after some of the preparations for the operation, and on returning found the patient making a good deal of noise, talking and throwing her hands and feet about, as is usual when the ether has taken a partial effect; one of the house surgeons was then holding the cone of ether over the mouth only, the chloroform, as I was informed, having been given previous to my return to the operating room; the nostrils were open and much the largest portion of ether was escaping by the sides of the open mouth of the cone, where also an abundance of fresh air was admitted; I directed no change in the mode of administration, but waited about five minutes (probably fifteen minutes from the time of commencement of exhibition of the anæsthetics), and then observing that she was more quiet, but breathing naturally, I turned to the table containing the instruments and selected my knife for the operation; turning again and approaching the patient, I observed that she had ceased to breathe; the house surgeon made the same discovery at the same moment; both the house surgeons were standing beside her head and had not left her one moment since the administration of the anæsthetic was commenced; I immediately felt for her pulse at the wrist, but it had ceased; I did not stop to put my hand upon her breast, but turned her at once upon her left side and then again upon

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her back; this was repeated three or four times and occasionally forcible pressure was made upon the epigastrium (pit of the stomach), when at length she made one long inspiration, and I hoped the danger was passed; at this time her face was rather pale, but not purple or otherwise discolored; this process of turning and pressing upon the epigastrium was continued, and in a few seconds she breathed again; during a period of perhaps eight or ten minutes the long inspirations occurred at pretty long intervals; her tongue, in the meantime, and until some time after death, was held forward from the glottis by a pair of tooth forceps; at the end of the eight or ten minutes the inspirations became much shorter and occurred at longer intervals; the poles of a galvanic battery, which I had ordered, and which was promptly at hand and in working order, were now applied to each side of the body opposite the diaphragm and heart; during this time alone artificial respiration by turns and pressure were suspended; observing no effects from the battery, it was soon laid aside and the manipulations were resumed; her lips were more purple; with a bistoury I opened her windpipe and introduced well into it a large flexible catheter, and with my own breath inflated the lungs, aiding the respiratory movements by pressure; inflation of the lungs through the catheter was repeated several times at various periods of time from the beginning to the end of the efforts; the chest was struck violently over the heart and over other portions with the palm of the hand; the windows were thrown fully open to admit air; at ten o'clock and forty minutes I declared to the gentlemen present that the case no longer presented a possible ground of hope; she had probably ceased to breathe for at least ten minutes, but I directed the efforts at artificial inspiration to be continued under my supervision, and they were not suspended until ten minutes after eleven o'clock; alarming symptoms were first presented about fifteen minutes after the inhalations commenced, and breathing ceased entirely within fifteen minutes thereafter; but the effects of the respiration were continued more than half an hour longer; both the ether and the chloroform employed in this case were manufactured by Dr. Squibb, of Brooklyn; the only complaint made of either of these articles by the surgeons who have used them in the hospital, so far as I am aware, is that the ether did not take effect quickly; this I had repeatedly noticed when exhibiting it for the purpose of operating during the past year; I have administered both chloroform and ether very frequently, especially the latter, and seen chloroform exhibited some hundreds of times; I have never seen death directly caused by ether, yet there are upon record more than a hundred cases of death by chloroform; I do not know that there are any recorded cases, well authenticated, of death from ether; I think the chlo-

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roform in this case was used with the ordinary precaution, yet I have no doubt it was the cause of death."

The verdict of the coroner was "that Ann McGlenan came to her death by inhaling chloroform while undergoing an operation for the purpose of forming a new nose at the Bellevue Hospital, February 4, 1867, and that the said operation was done at her own request The jury further say, in view of the fact that chloroform is used by all the faculty in the United States for the purpose of performing operations, we consider that there is no blame to be attached to Dr. Hamilton or to any of his assistants" The deceased was thirty-six years of age and a native of Ireland.

Diphtheria.—The prize essay of Dr. E. S. Gaillard, on Diphtheria, has afforded us so much satisfaction in its perusal, that we believe we can do no better than to lay before our readers the summary of his observations, hoping to draw the attention of the profession to the reading of the whole monograph.

SUMMARY.—We have thus seen that diphtheria is a zymotic disease, peculiar, separate and specific; that its pathology proves it to be a distinct disease; that its anatomical and physiological relations appertain to no other disease; that it is both epidemic and sporadic in its prevalence; that its etiology is obscure, and in no respect understood; that its symptoms and course render its diagnosis and differential diagnosis simple; that it is often contagious, but not so always; that its duration, in the acute stage, is from three days to three weeks, and when its peculiar sequelæ ensue, that the disease may persist for many months; that hygienic influences seem not to affect the cause of the disease, but that they do affect its course and result; that its relation to age is marked and direct; that children are its most frequent victims; that its complications are numerous, and most of them dangerous; that there is no direct relation between the throat lesions and the result; that it is peculiarly apt to recur, and that convalescence from its attacks is slow, tedious, treacherous, relapsing and interrupted; that there seem to be diseases coincidently occurring in the lower animals during its prevalence; that its sequelæ are peculiar and such as are not seen after any other disease; that its mortality, when uncomplicated, is not serious, but that its frequent complications render the mortality severe; that the chief cause of death is laryngeal implication, and next to this asthenia; that the prognosis can seldom be satisfactorily made; that in no disease does treatment more generally influence the result; that the autopsies prove (what is indicated by the pathology, the anatomical peculiarities, the symp-

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toms and sequelæ) that diphtheria is a zymotic, distinct and specific disease.

After a careful analysis and patient tillage of this field; after freely consulting all familiar with its cultivation, we now offer to our fellow-laborers the results of the harvest: "Corn from the sheaves of science," with the stubble produced to sustain it.

American Medical Association.—The eighteenth annual meeting of the American Medical Association will be held in Cincinnati, on Tuesday, May 7th, 1867, at 11 o'clock, A. M.

The following Committees are expected to report:

On Quarantine, Dr. Wilson Jewell, Pa., Chairman.

On Ligature of Subclavian Artery, Dr. Willard Parker, N. Y., Chairman.

On Progress of Medical Science, Dr. Jerome C. Smith, N. Y., Chairman.

On the Comparative Value of Life in City and Country, Dr. Edward Jarvis, Mass., Chairman.

On Drainage and Sewerage of Cities, etc., Dr. Wilson Jewell, Pa., Chairman.

On the Use of Plaster of Paris in Surgery, Dr. Jas. L. Little, N. Y., Chairman.

On Prize Essays, Dr. F. Donaldson, Md., Chairman.

On Medical Education, Dr. S. D. Gross, Pa., Chairman.

On Medical Literature, Dr A. C. Post, N. Y., Chairman.

On Instruction in Medical Colleges, Dr. Nathan S. Davis, Ill., Chairman.

On Rank of Medical Men in the Army, Dr. D. H. Storer, Mass., Chairman.

On Rank of Medical Men in the Navy, Dr. W. M. Wood, U. S. N., Chairman.

On Insanity, Dr. Isaac Ray, R. I., Chairman.

On American Medical Necrology, Dr. C. C. Cox, Md., Chairman.

On the Causes of Epidemics, Dr. Thomas Antisell, D. C., Chairman.

On Compulsory Vaccination, Dr. A. M. Bell, N. Y., Chairman.

On Leakage of Gas-Pipes, Dr. J. C. Draper, N. Y., Chairman.

On Alcohol and its Relations to Man, Dr. J. R. W. Dunbar, Md., Chairman.

On the Various Surgical Operations for the Relief of Defective Vision, Dr. M. A. Pallen, Mo., Chairman.

On Local Anæthesia, Dr. E Krackowitzer, N. Y., Chairman.

On the Influence upon Vision of the Abnormal Condition of the Muscular Apparatus of the Eye, Dr. H. D. Noyes, N. Y., Chairman.

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On the Comparative Merits of the Different Operations for the Extraction of Vesical Calculi, Dr. B. J. Raphael, N. Y., Chairman.

On the Therapeutics of Inhalation, Dr. J. Solis Cohen, Pa, Chairman.

On the Deleterious Articles used in Dentistry, Dr. Augustus Mason, Mass., Chairman.

On Medical Ethics, Dr. Worthington Hooker, Conn., Chairman.

On the Climatology and Epidemics of Maine, Dr. J. C. Weston; of New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. Alfred C. Garrett; Rhode Island, Dr C. W. Parsons; Connecticut, Dr. B. H. Catlin; New York, Dr. E. M Chapman; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Delaware, Dr. Wood; Maryland, Dr O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engelmann; Alabama, Dr. R. Miller; Texas, Dr. Greensville Dowell; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. W. H. Baker; Michigan, Dr. Abm. Sager; Ohio, Dr. J. W. Russell.

Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the permanent Secretary,

W. B. ATKINSON,
215 Spruce street, Philadelphia.

[Correspondence].

Editors of the St. Louis Medical Reporter:

I hereby send you the measurements of an anomalous human head as a singular specimen of craniology:

The subject is a negro boy of sixteen years of age, of dark copper color, medium stature and spare built. He states that he came from Missouri, that both his parents were full blood negroes, and that he has always had good health. He seems to possess more than ordinary intelligence, and to be inclined to the contemplative mood

His head measures twenty-four inches in circumference, and has the following diameters, viz.: Occipito-frontal, nine and one half inches, parietal, four and three-fourths inches, and the vertical, from the external meatus auditorius, four and three-fourths inches.

It will be observed that this head has the same perpendicular and lateral diameters, and the antero-posterior diameter is double that of either of the others.

Respectfully, A. G. FIELD, M. D.

Des Moines, Iowa, February 15th, 1867.

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Sugar Coated Pills and Granules.—We would call the attention of our readers to these valuable preparations put up by Wm. R. Warner & Co., and Bullock & Crenshaw, of Philadelphia. The formulas are such as are required in every day practice, and the reliability of the preparations of both of the above firms we can, from personal experience, guarantee. We also think, independent of the value of the remedies, that the elegant appearance, and the ease of administering them, speak volumes in their favor.

Bullock & Crenshaw, Philadelphia.—We would call attention to their advertisement, on pages 5, 6, 15, 16, 17 and 18 of the advertising department of the *Reporter*, of valuable preparations.

VITAL STATISTICS OF ST. LOUIS.

From January 1 to February 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records, by J. E. Folsom, M. D., Clerk of the Board of Health.

DEATHS DURING THE ABOVE PERIOD.

White Males	222	Still Born	42
White Females	178	Under five years of age	188
Colored Males	28	Between five and twenty years	51
Colored Females	22	Between twenty and forty years	88
Born in the United States	302	Between forty and sixty years	57
Born in Germany	75	Between sixty and eighty years	21
Born in Ireland	58	Bet. eighty and one hundred y'rs	8
Born in other countries	15	Total	450

DISEASES.

Accidents	10	Fever Typhus	8
Albuminuria	8	Fever Bilious	4
Aneurism	1	Fever Puerperal	7
Apoplexy	2	Gastritis	4
Asthma	2	Gangrene	4
Bronchitis	14	Hydrothorax	3
Carditis	6	Hydrocephalus	7
Cancer	3	Jaundice	2
Cerebritis	5	Laryngitis	3
Cholera Morbus	2	Labour	4
Convulsions	35	Marasmus	25
Concussion of the Brain	1	Meningitis	10
Congestion of Brain	2	Occlusion of Rectum	1
Coxalgia	1	Peritonitis	2
Croup	8	Pertussis	13
Diarrhœa	5	Phthisis	62
Diphtheria	6	Pneumonia	64
Dropsy	9	Rachitis	1
Enteritis	14	Scarlatina	3
Epilepsy	2	Trismus	7
Erysipelas	3	Unknown	2
Fever Typhoid	41	Variola	2

Erratum.—On page two, No. 1, Vol. 2, and line sixteen, in article on "Glycerin," read, *no* precipitate, instead of *red* precipitate.

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, APRIL 1, 1867. No. 3.

PELVIC CELLULITIS.

Read before the St. Louis Medical Society, by MONTROSS A. PALLEN, M. D., and Communicated for the St. Louis Medical Reporter.

By the term *pelvic cellulitis*, a name given to the disease by Sir J. Y. Simpson, of Edinburgh, is meant an inflammation of the cellular membrane found in the pelvis. It had been previously described by Doherty, of Galway, as "chronic inflammation of the appendages of the uterus after parturition," and by Churchill, of Dublin, as "abscess of the uterine appendages."

It occurs, however, under circumstances unconnected with parturition, and very often there is no abscess at all. The name, "pelvic cellulitis," although not altogether unexceptional, may be received as a very good one.

To fully understand its phenomena it is necessary to bear in mind certain anatomical facts relative to the disposition of the cellular tissue in the pelvis.

Within the pelvis there is a fascia furnishing sheaths to the different muscles, and also processes which support and separate the various organs therein contained. Whenever two layers of this fascia are opposed to each other, as in the broad ligaments, and whenever any organs lie in contiguity, as do the rectum and vagina, an abundant quantity of cellular tissue will be found.

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The same observation holds good relative to the pelvic muscles lying in juxta position, and in reference to the muscles and bones. The inflammation of this tissue constitutes the disease.

Such an inflammation very often occurs after parturition, but it is by no means limited to this condition. It may supervene upon abortion. It may follow operations upon the womb, such as dilatation of the os and cervix uteri, or the extirpation of a polypus, whether by excision, by torsion or by the ecraseur; or it may even supervene upon the division of an imperfect hymen. I have known it to occur in an unmarried female by taking cold during her menstrual period. A medical friend, Dr. W. H. Cooper, told me of a case occurring in a male, and writers aver that it not unfrequently follows operations on the urethra, rectum, etc., in the male sex.

Pelvic cellular inflammation may terminate in the effusion of serum or of coagulable lymph, or in the formation of pus. The inflammation having once been established, the first appreciable result is the effusion of serum, and which produces tumefaction and swelling, more or less readily detected, according to location, and, of course, is of greater or less extent in proportion to the amount of inflammation and the facility of circulation of the fluid along the cellular tissue, and of its passage from one division of pelvic fascia to another. It can be detected by examination through the vagina, or through the rectum, or through the abdominal parietes. When examined through the external superficies there is a great source of error which should be guarded against, and which consists in confounding it with many other tumors. Under the influence of purgatives, I have seen this swelling sensibly diminish, but increases again when the bowels are constipated (a condition which is not likely to occur in any other form of abdominal tumor) from the fact, that when the rectum is loaded with fœcal matter it pushes the tumor upward, and thus, apparently, its size is enlarged; but when a purgative has acted the tumor subsides more into the pelvis, and its size is again seemingly diminished.

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Examined through the vagina, should the swelling occur external to the margin of the broad ligament, and on the wall of the pelvis, it is fixed, as it were, to the bone. It is dense, hard and unyielding, and might readily be mistaken, by the careless observer, for an exostosis. This fixedness, however, will at once serve to distinguish the disease from fibroid tumors of the uterus or from an ovarian tumor. When in the roof of the vagina it occasionally feels as hard as if it were of scirrhous growth. In Ashwell's work on Diseases of Females, we meet with descriptions of hard tumors of the uterus successfully treated by the local application of Iodine. Ashwell evidently believed these to be of malignant nature; from their history I am led to believe that they really were cases of pelvic cellulitis, because a daily examination of these tumors showed a change of form and size until a cure supervened in their complete subsidence. Again, it is not uncommon for the cellular induration to embrace the entire circumference of the cervix uteri, fastening it *en masse*, and feeling very hard, it was not hard to mistake it for scirrhous growth, as the phenomena of pelvic cellutitis were not as well known as they are at the present time. It is well, too, to bear in mind that the inflammatory effusion is by no means limited to the true pelvis.

A few months since I saw a case where, from its very inception, a large tumor was felt by palpation over the right iliac region, and the vaginal glands were swollen and painful. This case ran on to suppuration, and which, when suspected, was proved to exist by the introduction of Simpson's Exploring Needle into the tumor, which brought a few drops of pus, when the bistoury was boldly and deeply plunged into it, and a large quantity of matter evacuated externally, and the patient rapidly recovered. Undoubtedly the disease, in this case, invaded the cellular membrane of the false pelvis. Simpson tells us that he has seen cases where the tumor was central, and as large as the uterus at the fourth month of pregnancy.

When coagulable lymph has been effused into the fascial interspaces of the pelvis, the tumor is extremely hard, and has

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been described by Doherty as "feeling like deal board." Adhering to the bones it really simulates a bony tumor, and as, when an effusion of coagulable lymph or fibrin has taken place, a long time elapses before it is absorbed; and one unacquainted with the history of the case, and called on after its continuance for many months, might readily be deceived as to its true nature.

It also not unfrequently happens that after the effusion of serum the disease continuing it runs into the suppurative stage, and herein consists the danger.

The pus may be developed in any part of the pelvis where the inflammation may have been set up, but it finds its way out in various directions, usually pointing to a mucous or cutaneous surface. Thus it may point upward toward Pouparts ligament, or it may pass underneath the pelvic fascia, and pursuing its course along with the femoral vessels, it will point somewhere in the groin. It has been observed to pass through the great sacro-sciatic notch along with the sciatic nerve, and leads to the formation of an abscess in the hip. Such a case was seen by Sir J. Y. Simpson and Dr. Moir.

As the most usual seat of pelvic cellulitis is in the folds of the broad ligaments, when matter is formed there, it usually makes its way to the superior portion of the vagina, and is there discharged in several ways. It passes into the vagina between the bladder and the uterus, or getting backwards, as is most frequently the case, it passes by the cul-de-sac of Douglas, between the rectum and the cervix uteri, or it may pass through the rectum itself. It has been known to burrow into the uterus or into the bladder. I recollect hearing Prof. C. W. Stevens report a case in this Society, several years ago, of pus being discharged through the bladder, but whether he described it as a case of pelvic cellulitis, I do not remember. When pus is thus discharged, a mucous or cutaneous surface, either naturally of itself or artificially by the knife of the surgeon, the result, under proper management, is usually favorable; but if unfortunately it should perforate the peritoneum, and is discharged into its cavity, a fatal peritonitis will in all probability ensue. For-

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tunately such is not very apt to occur, as it is a well known fact that the peritoneal membrane has a wonderful resisting power against penetration by pus; it seems to have an immunity from such results.

The symptoms of pelvic cellulitis can be briefly discussed. Chill or rigors, succeeded by fever, and accompanied by pains in the pelvis. Now, as the disease so often follows parturition, and as those of metritis or of metro-peritonitis are similar, an error of diagnosis may occur, which may be avoided, however, by noticing some of the other symptoms. For example, when the inflammatory tumor of pelvic cellulitis is developed and situated anteriorly, it will press on the bladder, and dysuria will be the consequence; when situated posteriorly it presses on the rectum and difficult defecation will be the result. Such symptoms alone will not ordinarily suffice to determine the nature of the disease, but to ensure accuracy, an examination per vaginam should be made, and then the surgeon will detect a tumor, either laterally, or anteriorly, or posteriorly, or on all sides, or on two sides. Should there be any doubt, an examination per rectum is also to be employed. One great point to bear in mind that during either method of examination, the female lying on her back, external palpation should be performed by the other hand, the pressure made downwards, and in the direction of the axis of the superior strait, when will be discovered the hard tumor, more or less oblong or rounded in form, and tender to the touch, sometimes exquisitely painful to the least impression.

By a judicious and proper treatment the disease may not advance beyond this stage, but it too often happens that the plastic lymph is effused, and that passes on to the formation of pus. When once pus is formed we may look for the supervention of other symptoms, viz, fever, pain and swelling more marked, or, having subsided, they again appear, or the pain may be experienced in distant parts, as the pus may change its location.

The character of the fever usually changes, but not always. I have seen the recurring fever, on the formation of pus, to present the ordinary form of continued inflammatory fever. Such,

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was the case of the lady already adverted to, in whom the pus was discharged by puncture in the right iliac region; but most often the fever presents the ordinary characteristics of hectic fever. Very often the pus can be detected by the sense of touch alone; but if any doubt remains, the use of the exploring needle will determine the question. It may be plunged without any fear into the centre of the tumor, whether through the abdominal walls or through the vagina; no fear need be entertained of any dangerous result. We are told by Sir J. Y. Simpson that on one occasion a distinguished surgeon introduced his exploring needle into a tumor of the groin, under the belief that it was a bubo, but to his astonishment no pus escaped, but instead a quantity of air. "It was a crural hernia, the sac of which had become inflamed, and into it he thrust the exploring needle, and thus saved himself from committing the fatal mistake of laying open a hernial tumor with a bistoury, when he intended only to open an inflamed suppurating gland."

The treatment of pelvic cellulitis is according to its various stages, viz., the formative, the progressive and the suppurative.

The formative stage is made appreciable by pain, most generally in the region of the uterus, after a more or less decided rigor or fever; there is dysuria also as a usual occurrence; and, in fact, the appearance of such symptoms would at once lead one to suspect inflammation of the pelvic fascia, particularly if supervening on any period of uterine action. Should, however, a tumor be discovered in the pelvis, either through the vagina or rectum, or both, then there can be no doubt that there is the formative process of the disease in question. As for the treatment, any of the usual anti-phlogistic methods are necessary, viz., purgatives, bleeding and emollient applications, together with the use of anodynes by the mouth and locally. Sir J. Y. Simpson dwells with great stress upon the extraction of blood from around the anus by leeches, from the fact that "the hemorrhoidal vessels are freely connected with the vessels that ramify among the pelvic contents and viscera, and by abstracting blood from the former set of vessels you can act on

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the latter at least as directly as from any other point." The bleeding may be promoted by relays of leeches. Leeches applied to the cervix uteri is also a most valuable adjuvant, and they may be applied by means of a conical speculum; the whole neck, however, should previously be well washed with tepid water. I rarely resort to the use of leeches in uterine complaints, preferring scarification, but when necessitated to employ them, I use my own modification of Sim's speculum, and plugging the os with a bit of cotton, I apply them, by means of a small glass tube, to whatever spot I may deem best. The advantage of this method is, that you see everything, and can place the leeches on the vagina itself should it be deemed proper. As to the propriety of ptyalising patients with pelvic cellulitis, the same objections may be made, and the same advantages held out as in the treatment of all serous inflammations; the same remark holds good in regard to opium. In fine, the surgeon's judgment is the best guide in the combating of all forms of primitive or formative inflammations.

When the serum or coagulable lymph is effused the disease is then in the progressive stage, and frequently it is here arrested, not proceeding to the suppurative condition. Here the almost constant application of hot water to the uterine neck is most invaluable, by means of a simple apparatus which I have devised for the purpose, and which consists of a bucket or bottle, capable of holding several gallons, having an india-rubber tubing five feet in length, with a vaginal pipe, which is easily adjusted, and the water flows from the bucket in a steady stream, which can be renewed as often as may be deemed expedient, and is caught by another bucket at the side of the bed, the bed clothing, of course, being protected by an india-rubber cloth, and the patient lying on her back, with her feet resting on a chair or stool at the bedside. With regard to medicines, the usual alterative plan is had recourse to with varying success. The bromide of potassium, however, seems to answer better than all others, and is highly recommended. I have used it in twenty grain doses, every four hours, with the happiest results. Counter-irritation

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by blistering, tincture of iodine, rubefacients, etc., are each found beneficial. Simpson prefers iodine. Inunctions of mercury and belladonna are good, and I have seen pain very much lessened by the use of an aconite and atropine plaster. This form of pelvic cellulitis may continue for years, or it may gradually disappear, sometimes to recur again, or it may run into the suppurative stage, which is to be treated as are all accumulations of pus, viz, the evacuation of the offending matter whenever it can be reached; and the treatment of certain cases in this stage will be the subject of a future paper.

CORRESPONDENCE.

Extract from a letter from Dr. Samuel H. Frazer to his father, Dr. E. S. Frazer, of St. Louis, and furnished to the St. Louis Medical Reporter.

Paris, January 17th, 1867.

You suggested in your last for me to write a letter about the surgeons here and their peculiarities. Now, it is not very difficult to write about the men, their personal appearance, etc., but it is extremely difficult to know their peculiar views, unless you are enabled to follow their services, as they are very careful never to write anything unless they can fully establish it, because there are so many eminently able men here who have no employment, that are watching for items, to pounce upon the unlucky promulgator of them, and drive him, nine times out of ten, to a professional death. In consequence of this state of affairs, the surgeons and physicians here are exceedingly careful about promulgating anything except that which is of mathematical certainty.

The hue and cry at present is directed against Guemay de Mussey, who wrote and presented to the faculty that he had discovered an additional and pathognomonic symptom of diaphragmatic pleurisy. He contends that by applying pressure between the sterno and clavicular insertions of the sterno-cleido mastoides muscles, on the phrenic nerve, that the patient ex-

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periences an acute and excessively painful sensation on the affected side, which he claims to arise from pressure applied on the above nerve, which you know distributes itself to the superior face of the diaphragm. He also contends that by pressure on the phrenic nerve, applied at the place above mentioned, pain is experienced in pericarditis.

Feeling somewhat interested in Dr. Guemay de Mussey, as I followed his service when I was at the Hotel Dieu, I thought I would go and witness his diagnosis. I saw him diagnosticate three cases, two of pericarditis, with articular rheumatism, and one of pleurisy of the diaphragm. The latter patient died, and the autopsy revealed the disease he had diagnosticated. Becoming still more interested, I concluded, as I was in the dissecting room every day, to investigate the distribution of this nerve. I found that it was from the third, fourth and communicating branch of the fifth cervical nerves, and then passing to the anterior external face of the scalenus anticus muscles, it descends to the root of the neck, lying obliquely across the scalenus anticus muscle, and passes over the first part of the subclavian artery, between it and the subclavian vein, it then passes between the pleura and the pericardium, between these two membranes it continues until it reaches the diaphragm. In its course it gives some small branches to the pericardium; on a level with the first rib it anastomoses with the subclavian nerve, and at the sterno-clavicular articulation with the great sympathetic. I was careful not to disturb the nerve in its position opposite the insertion of the sterno-cleido mastoid, so that I could see its relations between its two insertions, but after replacing the above named muscle, I found the nerve in following the anterior face of the scalenus anticus would pass two-thirds of an inch to the outside between the two points of insertion. Thinking, however, that I probably had, in removing the cervical fascia, so much displaced the sterno-cleido mastoid muscle that it was impossible to replace it so as to see beyond a question the relations existing between the two, I took another subject and dissected off the skin and subcutaneous tissue, to be

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certain that I was immediately over the triangular space that intervenes between the two insertions. After satisfying myself of this, I passed a long straight needle through the space and transfixed the scalenus anticus muscle, then dividing it in its inferior third, I found it passing through the internal border of the scalenus anticus, and about one-half inch to the inside of the nerve; so I can not think that this pain arises from pressure on the phrenic nerve. But the question presents itself, where, then, does it come from? I feel almost satisfied that it is from some of the inosculations that the phrenic makes in that immediate neighborhood.

PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF COD LIVER OIL.

Taken from E. Fougera's Circular, and the Medical and Surgical Reporter, Philadelphia. Copyright secured. Entered according to Act of Congress, in the year 1867, by E. Fougera, in the Clerk's Office of the District Court for the Southern District of New York.

"The minute division of the Iodine in Cod Liver Oil, the particular state in which it exists, must singularly facilitate its absorption by the tissues, and can in this way contribute more than the absolute proportion of this substance to the marked effects which this oil exerts on the animal economy.

"Also, Iodine in the oil is not eliminated from the system, AS THE OTHER SOLUBLE PREPARATIONS OF IODINE: in this elementary combination its action is slower, more regular, and more persistent, as it is successively set at liberty in the economy, in proportion as Cod Liver Oil is gradually decomposed in the blood.

"BOUCHARDAT,

"*Professor of Hygien, at the Academy of Medicine, Paris.*

"[Manuel de Matiére Medicale, pag. 749—1856.

The action of Cod Liver Oil on the system is a double one; it is nourishing by its fatty elements, and curative by its medicinal bodies—Iodine, Bromine and Phosphorus, which it naturally contains; and to these three substances must be attributed its superiority over other fats or oils, either animal or vegetable, in the cure of diseases. These facts, discovered and proven by physiologists in their experiments on animals, and confirmed by the experience of physicians in their daily practice, have been corroborated during the last eight years, in a most illustrative manner, by the administration, to a large number of patients, of a Cod Liver Oil five times richer in Iodine, Bromine and Phosphorus than any of the Cod Liver Oils known before.

Cod Liver Oil, as well as other fatty substances, when taken in too large quantities, is apt to disturb the stomach, and derange the functions of the intestinal canal. Only a small quan-

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tity can be digested and assimilated, the rest passing off unchanged, producing more or less frequent and abundant alvine evacuations, in which are contained the superfluous oils or fats. Observations prove that the gastric juice has no action whatever on fats or oils, the pancreatic juice being the only body which, by its emulsive properties, causes the absorption of these substances into the economy; and, therefore, all the oil not emulsioned by the pancreatic juice is evacuated by the intestines just as it was taken. The knowledge of this important fact is due to the recent observations of Claude Bernard, a well known authority in physiology. The oil, once emulsioned by the action of the pancreatic juice, is brought into the general current of the circulation as follows: It is first taken up by the chyliferous vessels on the surface of the small intestines, and passing through the mesenteric glands and the thoracic duct, it is discharged into the left subclavian vein, where it mixes with the venous blood returning to the right cavities of the heart. This blood, and the fresh nutritious elements, furnished by the two subclavian veins, are pressed into the lungs to be there oxidized and altered; while passing through the pulmonary circulation, the oily molecules are modified, and almost all of them destroyed. The blood, then, ready anew for nutrition, passes into the left ventricle, to be thence distributed through the arterial system, carrying along with it some oily globules left undecomposed during their speedy passage through the lungs, said oily globules being afterward successively altered in the circulating blood.

The medicinal oil, evidently brought undecomposed into the lungs, and partly into the general current of the circulation, is there modified losing not only its emulsive form, but also its oleagineous characteristics, so as to constitute a part of the arterial blood. Iodine, Bromine and Phosphorus are then set free, during the process of nutrition of the tissues, each part of our system appropriating to itself the substance it needs.

The tissues, in contact with the nutritious blood, having a tendency to appropriate to themselves the elements most proper to maintain their healthy condition, or to alter it when unhealthy, is it not judicious to conclude that the lungs first and then the rest of the system, when affected with Bronchitis, Phthisis, Scrofula, under any variety, or Rickets, etc., etc., are highly benefited by the healing and restorative action of the oil and its medicinal constituents, minutely, naturally and persistently brought in contact with the diseased parts?

That oils and fats are successively carried through the economy and transformed, as above described, is amply demonstrated by the experiments of the most eminent modern Physiologists, such as Claude Bernard, Tiedemann and Gmelin, Leuret and Lassaigne, Landras, Bouchardat, Blondlot, Delafond,

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Gruby, L. Corvisart, J. C. Dalton. Jr., A. Flint, R Dunglison, etc.

We must not forget this important point, that oils or fats go into the blood undecomposed and unchanged, being merely infinitisimally divided by the pancreatic juice; but if an oil contains substances, in a close chemical combination, so that they can not be easily separated, these substances will, of course, be carried into the blood with the oil itself. This is just the case with Fougera's Cod Liver Oil, which contains a large proportion of IODINE, BROMINE AND PHOSPHORUS. Iodine and bromine have so strong an affinity for oil, that they can not be separated from it by chemical reagents, not even by strong sulphuric acid. They must, therefore, be carried with the blood and liberated when the oil is transformed, in the process of nutrition into its elements, and becomes the chief agent by which the heat of the body is maintained. Knowing, then, that to the nutritive property of the oil is superadded the alterative, fluidifying and stimulating power of a comparatively large quantity of Iodine, Bromine and Phosphorus who can doubt the efficacy, as a medicine, of this new Cod Liver Oil?

Phosphorus, a part of our brain and bones, is a powerful diffusible stimulant, exciting the nervous organs, heightening the muscular power and mental activity, and relieving the despondency of mind occasioned by many serious diseases.

Iodine and bromine are superior to all alteratives for improving and purifying the depraved nature of the blood. They are the best remedies we possess for checking and controlling the swelling and induration of the glandular system, the ulcerative process in scrofulous complaints, the diseases of the lungs, etc. Obviously the main point in such serious affections is to check and control at once the ulcerative process, and to do so it is of the greatest importance to use PROMPT AND ACTIVE MEDICATION.

Superiority of Fougera's Cod Liver Oil over Simple Cod Liver Oil.—Until of late, natural and pure Cod Liver Oil has been the best remedy, and the one most generally used, with more or less success, in diseases of the lungs, when of a tuberculous character. The period of the malady, when the oil was first employed, and also the purity and strength of the remedy, accounting for the success or failure.

Pure Cod Liver Oil is more likely to cure Consumption, Scrofula, Rickets, Swelling of the Glands, &c., in the first stage of the disease; in the second and third stages it mitigates the severity of the symptoms and prolongs the life of the patient, but seldom saves it.

The reason for this difference of action is simply, that the pure oil contains iodine, bromine and phosphorus only in min-

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ute quantities, which, although sufficient to cure a disease in the beginning, is not powerful enough when it assumes a graver type.

If we suppose for an instant the discovery of a new, natural cod liver oil, containing more iodine, bromine and phosphorus than the oil in present use, there is not the least doubt but that every physician would prescribe it in preference, fully confident of its enhanced qualities. The natural consequence of this proposition explains satisfactorily why the medical profession should give, *and do rightly give*, the preference to Fougera's Compound Iodinized Cod Liver Oil, which contains a larger proportion of Iodine, Bromine and Phosphorus than the oil in present use; these active elements, as before remarked, are in such a peculiar combination that their action is slow, regular and persistent, being successively set at liberty in the economy, in proportion as the oil is decomposed in the process of animal life.

Some physicians are so well convinced that the curative properties of the oil reside in these three substances, that to obtain a full effect, they prescribe very large doses of the oil, somtimes giving two, three, and even four tablespoonsful, three or four times a day, the larger quantity amounting to no less than half a pint daily. That their object is not attained is fully proven by physiologists, who have demonstrated that only the quantity of oil, emulsionized by the pancreatic juice is digested and carried into the blood, the rest being lost and passed off nearly as taken.

Being deeply impressed with the above physiological and chemical facts, Mr. E. Fougera instituted experiments, and, after many trials, has succeeded (1858) in preparing a *Compound Iodinized Cod Liver Oil;* which is simply the best Newfoundland Cod Liver Oil, combined with four times as much of iodine, bromine and phosphorus as it naturally contains.

Pure Cod Liver Oil varies considerably in composition, as may be seen by comparing the different analysis published in works of chemistry and materia medica. A quart contains one to four grains of iodine, one-eighth to three-quarters of a grain of bromine, one-quarter to one-half of a grain of phosphorus. In 1860 Mr. Fougera has published in the *Repertorie de Pharmacie*, edited by Professor Bouchardat. at Paris, the formula of his oil which contains, per quart, in addition to the above quantities:

Iodine, 16 grains,
Bromine, 2 grains,
Phosphorus, 2 grains.

The combination is made so that the odor, taste and color of the natural oil are preserved.

Fougera's preparation being consequently five times more active than the richest commercial Cod Liver Oil, will tend to

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restore health by its curative action thus enhanced, in a much shorter time than the simple kind, and attains the desired effect where the other will fail.

The dose of this oil is *only* a tablespoonful for adults, and a dessert or teaspoonful for children, according to age, three times daily; it may be administered at any hour, but it is preferable to select the time of meals, since we know that the pancreatic secretion manifests itself only during the stomacal digestion, to act immediately on the alimentary principles as soon as they pass from the stomach into the intestin. Though the quantity of iodine is very small in each dose, it acts nevertheless with greater efficacy than a larger quantity of any of the iodides, for the reason stated by Professor Bouchardat and others, that iodine in Cod Liver Oil is not eliminated from the system as the other soluble preparations of iodine, but is successively deposited in the economy as the oil is gradually decomposed in the blood.

When iron is required with the oil, Fougera's Dragees or Syrup of Pyrophosphate of Iron will be found the most agreeable and active adjuvant. It is best for children and delicate persons to take the Syrup of Iron immediately after the oil.

ON THE TREATMENT OF RHEUMATIC FEVER.

By J. Birkbeck Nevins, M. D., Lond., Liverpool.

At a time when there appears to be a growing tendency to consider that it is a matter of indifference whether anything at all is done in rheumatic fever, except to keep the patient quiet in bed and supply moderate nourishment, I propose to lay before you a plan of treatment which I have adopted for many years, with the general result, as it has appeared to me, of: 1, speedily relieving the patient's most urgent symptoms; 2, shortening the general duration of the case; and 3, securing restoration to strength with less tendency to heart-complications or relapses than usual.

I shall illustrate the general features of the treatment by relating very briefly the case treated in this manner, which occurred last month, and therefore has the advantage of not being a selected one, but merely the last under observation.

The fundamental principle to be attended to is the one pointed out by Dr. Herberden above a hundred years since, when he recommended the employment of cinchona, in consequence of the resemblance between rheumatic fever and ague, as shown in the rigors, hot and sweating stages in both diseases, and the tendency to periodicity observed in the nightly excerbations of

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rheumatic fever; and, acting upon this analogy, he recommended the employment of cinchona in the treatment of rheumatic fever as well as of ague. Since his time, this remedy has been used from time to time; but it has not taken the firm hold upon the profession which it deserves, in consequence of the omission of various adjuncts, which it will not be my object to lay before you, as they were employed during the progress of the case to be related.

Case.—W. J., aged 45, a delicate looking man, steward of a steamship, had been suffering from rheumatic pains for a fortnight, but had gone about his work with difficulty until two days before his arrival in Liverpool, during which he was confined to his berth, unable to help himself in any way. He was carried on shore, and I saw him in the evening. He was unable to turn in bed, or to move hand or foot, except his left hand a little, though even that was acutely painful. He had no sleep for two days or nights; tongue furred; lithates in urine; pulse moderately excited, but no distinct heart-symptoms; not much sweat.

Treatment.—He was immediately ordered a vapor-bath of vinegar, with subsequent cold douche in bed, and ten grains of Dover's powder, which was followed by two hours of sleep, and such abatement of pain that he said he was easier the next day, though still unable to move his limbs or to turn in bed. He was also at once ordered two grains of quinine and five grains of iodide of potassium, to be taken four times a day. He had, on a subsequent night, a second Dover's powder, and this was all the opiate taken during the illness. The opium, therefore, formed a very insignificant part of the treatment; and this I have found to be the case almost without exception.

The remedies to which I attach importance are—

1. The vapor-bath, and subsequent cold douche, and
2. The combined quinine and iodine.

In this case the bath was given in bed, for the patient could neither turn in bed nor move his limbs; and it will generally be necessary to give it in bed, in the first instance, in any case deserving the name of rheumatic fever; and it is so easily administered, that no difficulty can arise to prevent its employment in every case.

Two large pieces of coarse flannel (common scouring cloths answer the purpose admirably) are to be soaked in common vinegar; about a pint being necessary for each cloth. Two common bricks are then to be heated nearly red-hot in the fire, folded up in these flannels, and placed on two plates. The patient being stripped, one plate is to be put a little distance from one knee and the other a little distance from the opposite shoulder, and the patient is to be covered over with the bed-

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clothes. In a few minutes he is surrounded by a most refreshing steam-bath, which produces a warm, agreeable perspiration, that may be kept up for twenty minutes or longer, if the bricks retain their heat sufficiently.

As soon as it is decided to remove them, the patient, still in bed, is to be very rapidly mopped all over with towels wrung out of cold water, then immediately wiped dry with dry towels, supplied with a warm shirt or flannel garment, and covered with a fresh, dry sheet, or with blankets alone, as may be most agreeable to him.

The effects of this bath are a speedy relief of the acute pain, and frequently easy sleep for a time; an abatement of the offensive and distressing acid sweats; and a general state of greater comfort.

The cold water application, immediately on the removal of the hot vapor, is very important, as it prevents a continuance of an enfeebling perspiration after the hot bath.

The manner of removing the patient's bed garment is a point of importance in cases of such painful helplessness as rheumatic fever; and it is accomplished without pain to the patient or difficulty to the nurse by an extremely simple contrivance. The clothes must be torn down the back from top to bottom; and, when this is done, they can be removed and replaced as easily as a child's pinafore, without even lifting a limb of the patient or disturbing him in bed. By this means, fresh, clean, dry clothing can be applied without difficulty once or twice a day, according to the amount of sweating; and the sufferer is relieved from the discomfort of his damp, offensive garments.

This bath may be repeated twice a week; and during seventeen years that I have been in the habit of adopting it, I have scarcely ever had to use it a third time in bed; the patient, after the second bath, being almost invariably able to sit up and have the third in a chair.

When he is able to sit up, a steam-bath can be given with great ease by putting a bucket of boiling water under a chair, the seat of which is sufficiently protected to prevent the patient from being scalded whilst he is sitting upon it covered with blankets; and, by putting a red-hot brick in the water in the course of ten minutes, the steam is kept up, as by this time it generally begins to abate from the original boiling water.

A jug of cold water may be poured over the patient when the blankets are removed, or he may be wiped by cold, wet towels, as is most agreeable to his own fears or feelings, and he must then be clothed and sit up for a few hours.

The second part of the treatment upon which stress is laid, is the combination of moderate—*i. e.*, two grain doses of qui-

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nine with five grain doses of iodide of potassium from the first. The theoretical grounds on which quinine was first proposed have been already mentioned; and the general experience of the profession will suggest the explanation of the probable benefit to be looked for from the addition of the iodide.

We will now return to the history of the case.

After using the bath and after the Dover's powder, he slept two hours, and was easier.

Second day of treatment—Tongue rather dry. Two glasses of wine daily in addition to his medicine.

Fourth day—Sleeps moderately, and takes food moderately. Very uneasy from lying so long unable to turn in bed. Can move one arm a little. Repeat the vapor-bath, and continue the quinine and Iodide.

Next day—fifth—Can sit up in bed, and move his arms so as to change his night-shirt in the ordinary way.

Seventh day—Walked down stairs with a little help.

Tenth day—Had a steam-bath in his chair.

Eleventh day—Walked a mile and a quarter.

Twelfth day—Went down to the office.

Sixteenth day—Called upon me just before going to sea.

Such is an outline of the plan of treatment which I have practiced habitually for the last seventeen years. During this time the cases have been numerous which have been thus treated; and the results have been so satisfactory that I have always returned to this method, although I have given a fair trial to the alkaline and to the lemon-juice treatment. I have not tried the do-nothing method; nor have I ever relied upon opium alone; and bleeding and mercurials I have no experience of.

During this period I have only had occasion four times to apply a blister for heart-symptoms; and there has not been any instance of troublesome cardiac affection. What has become manifest on these four occasions has readily yielded to slight blistering, and a continuance of the quinine and iodine.

When the disease, previous to admission, has been of a more chronic or frequently repeated character than in the case above related, the improvement has not been so rapid as to amount to a complete recovery in a fortnight; and, where there is much gouty complication, the case will probably be more lingering. But, after endeavoring to ascertain without partiality what method of treatment is most beneficial to the patient suffering from rheumatic fever I am increasingly impressed with the conviction that the plan now advocated possesses the advantage of—

1. Relieving the patient's suffering most speedily, both as regards pain, loss of rest, and sweating;

2. Of most quickly restoring the patient to strength, for it is

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extremely rare for him to be confined to bed more than a week, or to be confined to his room for more than a fortnight; and,

3. Of securing extraordinary freedom from heart-complications, or liability to relapses.—*British Medical Journal.*

SPASMODIC ASTHMA.

By A Sufferer.

Sir John Forbes has said that it is the duty of physicians to place in a more prominent point of view the hygienic treatment of disease; that this system is founded on an inquiry into the remote and exciting causes of disease; that it does not exclude the use of drugs, but regards them, generally speaking, as subservient to hygienic means—such as the regulation of the diet, temperature and purity of the air, clothing, bodily exercise, &c.

The treatment of spasmodic asthma, as laid down in most of the articles on that subject, is principally directed to the remedies thought useful during an attack, and for the improvement of the general health of the patient in the interval; but very little is said about the manner of life of the patient and of the exciting causes of attacks in those predisposed to it. A man with the asthma is not only a great sufferer himself, but his labored breathing distresses all those around him, and in a great degree unfits him for bodily or mental effort. By great carefulness and attention, combined with an accurate knowledge of the exciting causes of the spasm, an asthmatic, though he may never be free from a liability to the disease, may live with tolerable comfort to himself, and pursue, without serious interruption, many of the occupations of life. An endeavor to contribute something to this necessary hygienic knowledge, and to ward off the trouble so hard to bear and so difficult to relieve, is the object of this article.

The season of the year has a great effect upon this complaint; the predisposing cause is more powerful at some periods than at others, so that the exciting causes require to be more carefully avoided at those times. This disease is irregular in its effects upon different individuals, so that each case requires a careful and long-continued watchfulness on the part of both physician and patient. In this, more than any other disease, things that are usually considered trifles will counteract the best treatment. A man might take all the best remedies prescribed by the most judicious physician for the asthma, and they will not benefit him if he sleeps on a feather bed in a close room at night.

In the first place, attention to diet is important, particularly

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as regards quantity and time for taking food. But little food should be taken after dinner. Suppers are always dangerous to an asthmatic, particularly when taken just before retiring. Some articles of food the experience of particular individuals has taught them to avoid. I knew one gentleman who never could eat a cracker without exciting dyspnœa, though bread had no such an effect; these articles such persons should always avoid. Coffee, when taken strong and hot, without sugar and milk, is an efficient remedy during an asthmatic attack, and may be drank with advantage daily. Wine and spirits, taken in the evening, generally have a bad effect, and should it be deemed necessary to take any stimulant, Jamaica rum or whiskey, taken with the dinner, is the best. Brandy is almost always injurious in this disease. Some authors advise a strictly farinaceous diet; whether or no this will prove beneficial, each patient must ascertain for himself, should it be deemed advisable by his physician to try the experiment. There is a gentleman residing in this city who for many years was a sufferer from asthma, to such a degree at times he was unable to lie down for three consecutive nights; he gave up the use of animal food, because he suffered from headaches after using it. In time his asthma diminished, and at length left him, so that he has not had more than one or two accidental paroxysms for twenty years. Whether his diet benefited him or the disease died out, which it very rarely does, can not, of course, be determined with any certainty; but the case favors the trial of this kind of food by those who would not consider the constant remedy worse than the occasional disease.

The clothing should be warm, including a complete suit of flannel or thick silk, to guard, as far as may be, against the sudden and severe changes which we occasionally have in this climate.

Attention to diet and clothing is not sufficient for an asthmatic; this care only places him in as favorable circumstances as may be to breath easily, provided he does not encounter any of the many accidents which beset his path; any one of these may at times bring on a spasm of the bronchial tubes, and destroy his comfort for hours, if not for the day.

First of all, dust is dangerous, more particularly house dust; that of the streets is more harmless, because not so fine. But the dust from disturbing a feather bed, particlarly if it has seen years of service, or from a carpet just swept, is to many a sufferer a sure provocation of trouble. Equally injurious is the dust from hay or straw, or that produced by cleaning horses. Almost every asthmatic has some idiosyncracy in this respect, so that particular odors or dust affect him, whilst it may not others; as, for instance, some can not stay in a room with com-

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fort where ipecac has been used in a powdered state, though others equally liable to asthmatic attacks may not be at all affected by this drug. Of course, an intelligent patient will be careful to avoid, as far as possible, what he has once or twice found to be injurious to him; but unhappily there are many sufferers who seem incapable of distinguishing what it is that is troubling them, and they more particularly need the careful and minute directions of their physician. There are other circumstances, however, which will seriously affect the breathing of an asthmatic, which he can not control—such as a sudden and severe fall of the temperature. Let a man subject to this disease go out of a warm house, in the morning, into the air, with the mercury near zero, and he will not have gone far before his respiration will be seriously impeded, particularly if the day before was mild. To remedy this he should wrap a woolen comforter over his face and nose, so as to warm the air he inspires. Should the cold weather continue, the same person may on the next day experience no inconvenience from it. The night air in winter often affects a patient, even when he has been well during the day; the woolen comforter relieves this, also, with great certainty, better even than a respirator. If it can be done, let your patient ride or drive as much as possible, instead of walking. Riding or driving in an open vehicle gives positive relief to an asthmatic, even while suffering from the paroxysm. Mrs. Sigourney, in her "Past Meridian," gives an account of the Rev. Dr. Chapin, of Rocky Hill, who was a sufferer from youth from the asthma, and mentions, incidentally, that he frequently rose in the night and rode miles to parry the sense of suffocation. There are gentlemen in this city who can ride or drive for hours in our fall and winter with pleasure and comfort, who would look upon a walk around the Common, at times, as almost an impossibility.

If it is necessary for a person subject to asthma to go abroad on a cold, dry day, let him ride if he can; if not, let him at any rate protect his lungs, as far as possible, from the cold air, and and he will avoid many a distressing paroxysm.

But, after all, the night is the time most dreaded by the asthmatic; so many times has he gone to bed apparently well, with no apparent catch in his breath, and so many times, after dreaming, a dozen times over, the same wearisome dream, turning from side to side to get relief, has he finally been aroused to the painful conviction that his distressing malady is upon him, that he is apt to think that all precautions are useless and unnecessary. Where, however, a patient is able to arrange his sleeping room properly, he will avoid many attacks, and the severity of those he does experience will be much alleviated. His chamber, which he had better occupy alone, should be of

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good size, provided with a fireplace, the chimney of which should remain open always; and he should, if possible, have a register, such as is used for admitting the heat from a furnace, let into the flue of the chimney near the top of the room. Persons in good health would derive an advantage from this last precaution, in the superior purity of the air they would breathe during the night. During the summer, when the windows of the chamber are open, the door need not necessarily be open, though even then it is better that it should be; but in winter an open door is a great safeguard—for the patient it is almost indispensible. The bed should be entirely free from feathers. Mattress, bolster, pillows, all should be of good curled hair. A large, square pillow, raising well the head and shoulders, is much better than a small, long one. The bedstead had better stand out into the room, not be placed against the wall, or in any alcove or recess which will in the least prevent the access of fresh air to its occupant. If you make this chamber moderately warm by furnace heat from the entry, or by an open fire not made from anthracite coal, everything has been done to ensure for the asthmatic a comfortable night. If he has eaten but sparingly since his dinner, and then in the early evening he will probably sleep well.

Another element of discomfort to the asthmatic that should be mentioned, is change of place. He never sleeps so well as in his own room; consequently is a poor traveler, principally because it is difficult to find elsewhere the comforts and conveniences adapted to his own case with which he has surrounded himself at home.

Smoking a cigar during a paroxysm will often give relief, especially if the patient inhales the smoke, after it has passed from the mouth, with moderation. For this purpose the cigarettes composed of tobacco and stramonium give decided relief. Since the discovery of ether as an anæsthetic it has also been employed with marked success for the relief of asthmatic attacks.—*Boston Medical and Surgical Journal.*

THE QUININE DISTRICTS OF THE ANDES.

The official report on the efforts of the Indian Government to introduce the quinine plant in the mountainous regions of India, to which we drew attention in a previous number, contains also a very interesting account of the culture, climate and habitat of the cinchona plant of South America Mr. C. R. Markham, of the India office, in a memorandum which he submitted to the Indian Government, stated that he considered it to be very important that seeds of the species which grew in

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New Grenada, being hardy, and yielding a large per centage of the quinine, should be obtained for propagation in India, and the Secretary of State made arrangements with Mr. Cross for this purpose. That gentleman accordingly made a tour of the Andes, and passed through districts which had not been previously explored, for it appears that even Humboldt, who visited Popayan, did not penetrate many of the forests which were visited in this search for seed. The official notice of the work performed states that Mr. Cross had to face dangers and hardships of no ordinary kind, which proved fatal to the object of his first mission, as the seeds he had collected were destroyed; but a renewed visit, made at the instance of the India Office, was more successful. At the time of receiving his instructions, Mr. Cross was residing near the Red Bark Forests, on a high table-land on the western slopes of Chimboraza, at an elevation of 10,000 feet above the level of the sea, and from this district he commenced his ascent of the northern shoulder of the Chimboraza, and reached the highest part of the pass, which has an elevation of nearly 15,000 feet. After passing through districts where barley and potatoes were cultivated, he came upon an edible species of *Oxalis*, and then reached immense tracts of land covered by a species of *Stipa*, which with gentians, *Chuquiragua insignis*, and other plants of the order *Composiæ*, ran up to the very verge of perpetual snow. Passing along a road hedged on both sides by monstrous specimens of *Agave Americana*, he came to the snow covered cone of the volcano Cotopaxi, from which a perpetual rumbling noise is heard, and which sends up a flame to a height of 1,000 feet above the summit of the crater. Our traveler next passed the borders of the Laguna de San Pablo, which was surrounded by tumuli, some of which were of the extraordinary height of 400 feet, and thence to the plains of tuquerres, which, at a height of 10,500, feet produces a *Barnadesia* with white flowers, and where a dwarf species of gentian was in full bloom, covering the ground as thickly as daisies do in a pasture field in England. At Pasta he came to a district which has a wild temperature, being surrounded by forest-covered mountains, where a species of *Cinchona* is cultivated, chiefly for export to the United States. Pasta is also a market for vegetable dyes, which are brought there by the Indians. There was much cinchona bark stored up at this place, and also in sheds in the forest; but as its yield of quinine was small, it did not sell readily. The bark had a yellow or orange color, and in the fracture was coarse and fibrous. Mr Cross describes the tree producing it as the *Cinchonia lancifolio* of Karston, being of great size, with large lanceolate coriaceous leaves and bark, covered with silvery epidermis. After passing through a series of adventures of no ordinary kind, Mr. Cross arrived at the city of Popayan, which lies between two volcanoes,

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at nearly 6,000 feet above the sea. He next reached Sylvia, the headquarters of those who buy the bark of Pitayho, Hambola, Tortory and Purrace. Passing on to Pitayo, some choice plants were discovered, and here Mr. Cross selected seed from trees about fifteen feet high. He remarks that the color and depth of the soil varied from light brown to nearly black, and was from three inches to three feet in depth. In all situations the vigor of the cinchona plant appeared the same, but it was restricted to the dry slopes, and was never found on wet ground. After drying the capsules, he occupied himself in taking the temperature of the region, and he found that at the lowest limit of the cinchona it rose during the hottest days to 59° or 60°, but at night fell to 46° or 48°, and at certain periods below freezing point; at the upper limit, the temperature ranged during the day from 40° to 48°, and at night fell to 35° or 36°. Hence it would appear that in dry situations it favors the plant to have an occasional fall in the temperature of three or four degrees below freezing point, and a daily range of from eight to twelve degrees.

The general vegetation of this region consisted of pipers, solanums, brugmanzias, fruhsias, smilax, etc. The winds, which in summer are often violent, do not appear to affect the cinchona, but the forests are very rarely enveloped in mist. It appears to be a delusion, therefore, on the part of some persons who assert that torrents of rain and mist are necessary for its growth. Mr. Cross states that "he had been in localities in the Andes which had altitudes similar to that of the cold cinchona region, where only a species of *Salanum* would grow, and which looked as if on the point of extinction, from the abundance of mosses which twined round the smallest shoots to the points. No cinchona could live in such a climate, a certain amount of dry weather being necessary for ripening the capsules." It appears that all the bark taken from Pitayo is sent to France, and that the bark sold in England under that name is not true Pitayo bark, but comes from the mountains which border on the valley of Madalena, from Almaquer and Pasta. Mr. Cross states that this spurious Pitayo bark of the English market is from the *C. lancifolia* of Karston, and is very inferior in quality to that of "Pitayo, the latter being not much thicker than window-glass, being taken from small plants; the large trees having been destroyed long ago." Mr. Cross then continued his journey to the great valley of the Magdalena, the town of Neyva being the principal emporium for the bark of the district; and thence he returned to Paramo, having accomplished a difficult and interesting journey, during which he collected a vast amount of information, which can not fail to be of great practical importance to cultivators of this valuable plant. Viewed merely as a geo-

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graphical exploration, this journey over a considerable portion of the Andes can not fail to attract the attention of scientific men, and Mr. Cross' remarks on the vegetable productions of this vast region must interest botanists and chemists. Mr. Clements R. Markham, in his official memorandum, states that "Mr. Cross deserves great credit for the skillful and energetic way in which he performed this difficult service." It appears that a portion of the seed obtained has been supplied to the Mexican Government, who are anxious to cultivate the cinchona plant.—*London Chemist and Druggist.*

REMARKS ON PROGNOSIS, ETC., OF EPILEPSY.

In making some remarks about the prognosis of epilepsy, and convulsive diseases in general, Dr. Althaus maintained that we had to distinguish very carefully between such convulsions as were the symptoms of actual disease of the nervous centres, and such as depended merely upon disturbances of function and the finer processes of nutrition, but existed without manifest alterations of structure discoverable to our senses. Where we had to do with convulsions which were caused by organic lesions of the brain and spinal cord, we might do a great deal to relieve symptoms, but could not hold out any hopes of perfect recovery, as we had hitherto failed to discover any remedies by which we could restore organs damaged in their coarser texture to their previous healthy condition. On the other hand, where the disease existed without any manifest structural lesions which might be considered as their cause, but was only accompanied by changes in the intimate molecular nutrition of cells and fibres, the prognosis was, as a rule, favorable, as we possessed remedies by which all the functions of the body and all the finer processes of nutrition might be powerfully influenced and controlled.

This principle, if applied to true, idiopathic or centric epilepsy, would give us much greater hopes of obtaining curative results than had hitherto been believed. Epilepsy had been too much considered as incurable from the first, and, therefore, less trouble had been taken in its treatment than in many other diseases. Dr. Althaus thought there was no doubt whatever that centric epilepsy was a mere functional disorder of the brain; for, on collecting and analyzing the post-mortem examinations by the most competent observers, it appeared that, although various organic lesions had from time to time been noticed in the bodies of epileptics, yet there was no peculiar

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structural change constantly found in them, and that, in very many instances of confirmed epilepsy, all the organs of the body had been found perfectly healthy. Such lesions as were occasionally met with were either due to complications foreign to epilepsy itself, or they were the proximate results of the fits. At one time changes in the pituitary body were believed to be constantly connected with epilepsy; but more enlarged experience had shown the fallacy of this opinion. Schroeder van der Kolk discovered, in some subjects he dissected, enlargement of the capillary vessels, and granular disintegration of the medulla oblongata; but he rigidly looked upon the changes, not as causes, but as effects of the attacks. We were, therefore, fully justified in drawing the conclusion, that epilepsy was not a structural disease, but one of disordered function of the brain.

The following appeared to be the *rationale* of the epileptic attack: A state of undue excitability was induced in the medulla oblongata. Irritation of the vaso-motor nerves, in its turn, caused contraction of the arteries of the meninges of the brain, whereby cerebral circulation was arrested, and a condition of anæmia brought about, which was the proximate cause of both loss of consciousness and of the convulsions. At first there was *tonic contraction* of the cerebral arteries, and to that stage corresponded the tonic convulsions, the tetanic rigidity of the frame; this was succeeded by *clonic contractions* of the cerebral arteries, to which again corresponded clonic convulsions in the muscles of the body. After the clonic contractions had subsided, *paralysis* of the arterial walls was produced, to which corresponded the stage of exhaustion and prostration. Cerebral circulation was then gradually re-established, and the patient recovered either completely or partially, according as the disease was pure or complicated epilepsy, and according to various other circumstances peculiar to each case. The chief point of interest, however, was that the worst form of true and uncomplicated epilepsy existed without structural lesions of the brain, being merely due to disturbances of cerebral nutrition and circulation, and being consequently a curable disease.

There was no specific for the cure of epilepsy, nor did Dr. Althaus think it probable that such a one would ever be discovered. Each case had to form a special study for the practitioner, and the result of the treatment would, in a great measure, depend upon the amount of skill and discrimination with which the resources of art were brought to bear upon the individual case under consideration.

Our first object should be to do everything in our power to prevent any further attacks from taking place. Some authors were of the opinion that the mere arrest or postponement of an attack was of no benefit to the patient; but he (Dr. Althaus)

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entirely disagreed with this opinion. Observation had shown to him unmistakably that every further attack strengthened the epileptic habit, and rendered it more difficult to combat; besides which the attack generally entailed great prostration and exhaustion of nervous power. In order to prevent an attack effectually, we should be for ever on the watch for those premonitory symptoms or warnings which were present in the majority of cases, and showed that mischief in the brain was brewing These warnings were of a very different nature. Some patients distinguished between "threateners" and "reminders." The former, which were more immediately dangerous than the latter, consisted of spasmodic sensations running upwards from some peripheral part of the body, and, on reaching the head, either caused the patient to fall down in an attack, or merely produced a sensation of utter faintness and sickness, which obliged the patient to hold perfectly still for an instant. "Reminders" might be compared to exceedingly slight electric shocks, darting forwards and backwards through the head, and never felt in peripheral parts. They did not generally usher in an attack, but showed that nervous matter was in a very unsettled condition, and that an explosion of force, in the form of an attack, might be expected at no very distant time. Other warnings which had been noticed in patients now under treatment in the infirmary were: more or less prolonged drowsiness; confusion; dizziness; twitchings of the face and arms; flushing of the forehead; great wakefulness at night; voracious appetite; beating in the shoulder blades; an inclination on the part of the patient to hide himself; crawling sensations in the stomach; pain, burning or tickling about the ears; sudden stoppage of circulation in the hands, which get cold and white; swelling of the lips; and certain delusions, such as the perception of bad smells which did not exist, etc. The last mentioned symptom Dr. Althaus had known to precede an attack as long as five days. If such warnings were vouchsafed to the patient, immediate action on our part was necessary to prevent an attack from taking place.

Our second object in the treatment of epilepsy should be to induce a total and permanent change in the finer nutrition of the brain and nervous matter generally, so as to remove all undue excitability, and restore their proper controlling force to the centers of consciousness and motive power. Our last, but by no means least important, aim should be to make the general health of the patient as good as possible, and to remove any source of irritation from mind and body. Dr. Althaus promised for another occasion a full description of the various remedial measures employed by him in order to attain these objects.—*Lancet.*

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LIQUID GLUE.

1. Dissolve bruised orange shellac in three-fourths of its weight of rectified spirit, or of rectified wood naptha, by a gentle heat. It is very useful as a general cement and substitute for glue.

2. Another kind may be made by dissolving one ounce of borax in twelve ounces of soft water, adding two ounces of bruised shellac, and boiling till dissolved, stirring it constantly.

3. Dissolve 1,000 parts of glue in 1,000 parts, by weight, of water, in a glazed pot over a gentle fire. When it is melted, add nitric acid (sp. gr. 1.32) 200 parts, pouring it in very gradually. An effervesence is caused by the escape of hyponitrous acid. When all the acid is added, allow the mixture to cool. This glue is found to remain unaltered on exposure to the air. It is applied cold, and is recommended as very convenient in chemical operations.—*M. Dumoulin.*

AN EXTINCT RACE.

One of the most remarkable races that ever inhabited the earth is now extinct. They were known as the Guanches, and were the abroginees of the Canary Islands. In the 16th century, pestilence, slavery, and the cruelty of the Spaniards, succeeded in totally exterminating them. They are described as having been gigantic in stature, but of a singularly mild and gentle nature. Their food consisted of barley, wheat and goat's milk, and their agriculture was of the rudest kind. They had a religion which taught them of a future state of rewards and punishment after death, and of good and evil spirits. They regarded the volcano of Teneriffe as punishment for the bad. The bodies of their dead were carefully embalmed and deposited in catacombs, which still continue to be an object of curiosity to those who visit the islands. Their marriage rites were very solemn, and, before engaging in them, the brides were fattened on milk. At the present day these strange people are totally extinct.—*Friend's Intelligencer.*

INDIA-RUBBER VARNISH IN SMALL POX.—The small-pox patients in a London infirmary, just after the full development of the eruption, have had their faces painted with a solution of india-rubber and chloroform. This method of treatment is said to prevent the almost intolerable itching, as well as the unsightly cicatrices.

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THE MEDICAL REPORTER.

ST. LOUIS, APRIL 1, 1867.

American Medical Association.—The eighteenth annual meeting of the American Medical Association will be held in Cincinnati, on Tuesday, May 7th, 1867, at 11 o'clock, A. M.

At the meeting held in Baltimore, in May last, the following resolution was adopted with much unanimity:

Resolved, That this Association earnestly requests the medical colleges of the country to hold a convention for the purpose of thoroughly revising the present system of Medical College instruction, and that a committee be appointed to aid in carrying the resolution into effect.

The following named gentlemen were appointed on said committee: N. S. Davis, M. D.; Worthington Hooker, M. D., M. B. Wright, M. D. and George C. Shattuck, M. D.

In fulfilling the duties enjoined on them, they respectfully and earnestly invite the Trustees and Faculty of each of the Medical Colleges in the United States to send representatives to a convention to be held in the city of Cincinnati, Ohio, on Friday preceding the next annual meeting of the American Medical Association; namely, on the 3d day of May, 1867. They would also respectfully suggest that all delegates to such convention be prepared to consider fully and act upon the following subjects:

1. The adoption of a more uniform and just rate of lecture fees by all the colleges in this country.
2. The propriety of increasing the length of the annual lecture term, and the number of professorships.
3. The adoption of measures for securing more thorough attention on the part of students, to the more elementary branches of medical science, and a more progressive order of medical studies.
4. The practicability of requiring three annual courses of lectures, instead of two, as a condition of graduation; and of making hospital clinical instruction a necessary part of the third course.
5. The practicability of establishing and exacting some appropriate standard of preliminary education for young men proposing to enter upon the study of medicine.

We can not but commend the above, and trust that Medical Colleges of the country will fully respond to the invitation. We

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see that in England they require a high grade of intelligence and a certain amount of preparatory study previous to being accepted as students; for, according to the London *Lancet*, it has just been enacted in Great Britain that no medical student shall be admitted to lectures until he shall have been closely examined in the higher branches of an English education, with mathematics and Latin; that no student shall be examined for his final degree until he shall have attended four winter sessions of lectures, or three winter and two summer sessions, including in each session all the branches of medicine, with physics, botany and general history. It might be hard to require as high a standard in this country as the above, but the nearer we approach to it the better it will be for the future honor of our profession.

We would also suggest to the convention, while defining what shall be the qualifications of the students previous to graduating, that they also prescribe what shall be the qualifications of those selected as teachers; for it is utterly useless to require superior knowledge of students unless they are placed in charge of professors competent in every respect to teach them all that it is necessary for them to know; and, in our opinion, the fault of our present system lies as much with incompetent teachers as from lack of study on the part of the students. More especially does this apply to our Western schools, where one or two eminent men have, in order to make up a school, to associate themselves with either young and inexperienced or greatly inferior men, and thus the student does not have the opportunity to learn what is so essential to his success as a physician. We say, let only men be placed as professors who are fully qualified from great learning and experience to teach medicine, men whose moral worth and professional skill will ensure for them the respect and earnest attention of the student, and men who are above reproach, that they may serve as a true guide for the young student to go by, and we would speedily see an improvement in our medical classes. So that we again say, let the convention give heed to the qualifications both of the professor and the student, and then can we hope for a marked progress in our time-honored profession.

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The St. Louis College of Pharmacy.—This Institution closed its second session on the 31st ultimo. The class, though not so large as that of the year preceding, was yet, by its character and its attention, sufficiently encouraging to the friends of the College. As frequently happens in new undertakings, some changes have been necessarily made since last year. Mr. Hubert Primm has given a most satisfactory course on Practical Pharmacy, and Mr. F. McArdle, though appointed at a very late day in the session to the Chair of Chemistry, has given earnest of his entire capability of performing his duties, and will, without doubt, give as thorough instruction in his branch as can be obtained elsewhere. The facilities for teaching have increased; and we may say, in good faith, that the College will compare favorably with older schools, and must ultimately, in the West, hold a very important position. It will be the effort of the Board of Trustees to afford from year to year every facility for the study of Pharmacy; acting under the conviction that, at the present time, the apothecary must be educated for his business. We wish every success attendant upon the career of this institution whose existence is so vital to the interests of the community.

The following gentlemen received the degree of Doctor of Pharmacy: E. J. Williamson, Justin Steer, Hugo Krebs and R. V. S. Reber.

The Air we Breathe.—An eminent French chemist made the following experiment, which tells an interesting and frightful story about the quality of the air breathed in theatres and other close houses, containing a thousand or more persons:

"He carried into a theater, at 10 o'clock at night, a bottle of ice, placed on a plate, and then collected the vapor which rapidly condensed on the outside of the bottle and flowed down on to the plate. At first this vapor thus collected had the smell, the taste and, so far as could be determined, every chemical quality belonging to the waters of the most deadly fever marshes. Under the microscope, this water was at first clear, but soon, that is to say in a week, it was found to be full of fine animaculæ. A little later on these animalculæ had grown, and the big ones

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were pursuing and devouring the little ones. Still later on, at the end of two months, the water was thick with animalculæ; various forms were seen, and still the work of destruction was going on. At last but three hideous monsters were seen—microscopic monsters, of course, since they were contained in a drop of water—and these were still fighting to see which could devour the other. At the end of three months the water was clear and miasmatic again.

Treatment of Acute Rheumatism.—Dr. Chas. E. Buckingham, of Boston, has introduced the following as a new treatment of that disease. He says:

Having for a year past used what I consider a new remedy for rheumatism, and with better success than from any other remedy, I consider it proper to ask the profession to make a trial of it. It is the syrup of lime, made according to Trousseau's prescription. I have used it, according to the severity of the case and the age of the patient, in the dose of ten drops to forty-five drops, and repeated in from two to six hours, as symptoms have seemed to demand. In but one case has any opiate been required from the beginning. Two cases were complicated with Bright's disease, as indicated by the great abundance of albumen and the casts, as seen in the urine. In one of these the albuminuria entirely disappeared, and in the other it had been largely diminished.

There has been no constipation, but generally looseness of the bowels, after a couple of days' treatment.

The medicine is best taken in unskimmed milk, in quantity from a tablespoonful to four ounces, according to the size of the dose of syrup.

The diet in most cases has been left to the patient's choice.

His formula for the preparation of the syrup is as follows: Mix two ounces of lime, unslaked, and eight ounces of sugar together in a mortar, and pour over the mixture a wine pint of boiling water. Add boiling water enough to make up the pint, and filter. By the use of boiling water, the operation is more rapid and the formation of lumps is avoided.

Wm. R. Warner & Co.—Have greatly reduced the price of their valuable Sugar Coated Pills and Granules, as see their new advertisement in the advertising department. Wm. H. Crawford, St. Louis, Western Wholesale Agent.

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Cause of Cholera.—A letter dated Munich, January 19th, published in the *Aix-la-Chapelle Echo*, of January 24, contains the following statement: Prof. V. Pettenkofer is back some days from his travels. It is said that he is completely satisfied with the result of his examination of the towns visited by cholera last summer; and his conference with Prof. Griesinger, Wunderlich and the Englishman, Macpherson, is said to have led to almost complete agreement of opinion. We hear that the Professor will soon lay his latest results before the Medical Society in a complete shape. At the same time an astonishing observation is conveyed to us from Vienna. Dr. Klob has, with the use of a microscope of from 800 to 1000 magnifying power, discovered in the rice water evacuations millions of microscopic fungi, which, in appearance, differ little from the ordinary European forms; and that cholera is easily propagated by their means can scarcely any longer be doubted.—*Brit. Med. Journal.*

Southern Journal of the Medical Sciences.—We would call the especial attention of our readers to the above excellent work, published quarterly, in New Orleans. In style of typography and design, as well as the superior order of editorial ability, it is not excelled by any journal in the United States, and is aided by the best medical talent of the South as contributors. We are pleased to announce that we have made arrangements to commute with the above, and can furnish *The St. Louis Medical Reporter* and the *Southern Journal of Medical Sciences*, for one year, for the low price of $8 00, in advance. We trust our friends will bear the above in mind.

E. Fougera, New York.—We would call attention to the preparations of this eminent manufacturing establishment, as see advertising department of the *Reporter*. The article on Cod Liver Oil, on pages 74, 75, 76, 77 and 78 of the *Reporter*, is from the pen of Dr. Bissel, of New York, and we cheerfully publish it as taken from Mr. Fougera's circular. We have, personally, used Mr. Fougera's Compound Iodinized Cod Liver Oil, and can, from experience, pronounce it one of the best articles of the kind now in use, and trust it will receive that attention from the profession which it so deservedly merits. His other preparations also stand high, both for excellence and purity.

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THE CRATER OF KILAUEA, HAWAIIAN ISLANDS, IN 1864-5.

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THE SAINT

MEDICAL [illegible].

A SEMI-MONTHLY RECORD OF [illegible]

EDITED BY

J. S. B. ALLEYNE M. D., AN[illegible]

VOL. II. ST. LOUIS, APRIL 15, 18[illegible]

THE VOLCANO OF KILAUEA HAWAII[illegible]

[illegible]

BY W. T. BRIGHAM

Soon after [illegible] o'clock we arrived [illegible] crater. From below us steam and [illegible] uma but we saw [illegible] and heard [illegible] had, as it were, [illegible] nothing but [illegible] scene of its triumph. The [illegible] with steep rock-walls, from three [illegible] hundred feet high, and nearly nine miles in circuit. [illegible] are situated within this crater and [illegible] more than all it. The whole circuit of the walls is [illegible] interrupted, and we rode along [illegible] of which opened about a year [illegible] centric, and others radial, [illegible] are fumaroles from which issue [illegible] Geysers of California, with great [illegible] but gen respectable teakettle powers [illegible]

* The above article is taken from the first [illegible] Naturalist, St. Louis, March, and [illegible] for which and other favors [illegible] Naturalist.

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, APRIL 15, 1867. NO. 4.

THE VOLCANO OF KILAUEA, HAWAIIAN ISLANDS, IN 1864-65.*

[*With Plate.*]

BY W. T. BRIGHAM.

Soon after one o'clock we came upon the brink of the great crater. From below us steam and vapor rose in a sluggish column, but we saw no fire and heard no noise: the conflagration had, as it were, left nothing but smoking ruins to mark the scene of its triumph. The deep plain before us was surrounded with steep rock-walls, from three to seven hundred feet high, and nearly nine miles in circuit. Boston could easily be accommodated within this crater, and Vesuvius would not much more than fill it. The whole circuit of the walls is much broken and interrupted, and we rode along over several large cracks, one of which opened about a year since (in 1863). Some are concentric, and others radial, and all along the edges of the abyss are fumaroles from which issue clouds of steam, not as at the Geysers of California, with great noise, but gently as a quiet respectable teakettle pours out its vaporous offering. The steam

*The above article is taken from the first number of that excellent work, The American Naturalist, Salem, Mass., and republished in the St. Louis Medical Reporter, by permission, and for which and use of plate we are under special obligations to editors of the Naturalist.

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had no smell of sulphur, and ferns were growing luxuriantly over the openings, while the condensing vapor formed pools of sweet water, the only source of drinking water in this fire-searched region.

When we reached the northwestern part of the crater, we found on our left a ridge of reddish earth, from which steam and strong sulphurous fumes poured in many places. This was the western sulphur Bank, and in its cracks were forming the most beautifully delicate crystals of sulphur, almost mosslike; and here and there a blue crystal of sulphate of copper, and greenish masses of sulphate of iron. The earth, which is formed by the decomposition of the lava, was quite hot, and we found some natives cooking fern stocks in the steam.

While we were examining the sulphur deposits, our men came up with our blankets, and we at once engaged an old kanaka, who lived near by, to guide us down into the crater. Two other kanakas went with us to carry water and bring back specimens. The descent was at first quite steep, down the hard grey walls; and then the path wound along on broken shelves, under a grand precipice two or three hundred feet high, quite perpendicular, and looking as if built of regular blocks of stone. Small shrubs grew by the way, and we picked berries (vaccinium) in abundance. At last, after a rapid descent on a steep gravelly bank, we stepped into the fresh black lava of the crater floor. This floor looked quites mooth and level from above, but we found it was very rough and uneven. The fresh lava we first met had broken up during the last winter and overflowed all the end of Kilauea, and it was piled in twisted masses and broken slabs and bubbles. Its surface was covered with a thin nitrous crust, which crumbled beneath our tread, sounding as hard frozen snow does on a frosty morning, and thus a distinct path had been worn to Lua Pele or the great fire-pit, which is at the southwestern end of the crater proper.

Half a mile of such traveling and we came to a wall of hard trachyte, quite unlike the lava of the floor, which seems to have

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been floated up here from the walls below. The great blocks which compose it are said to change their position from time to time as the floor rises and cracks. Fissures of all sizes were common, and from many of them steam issued, changing the black lava to a reddish hue. The action of vapors and gases had produced fragments of all shades and colors, some so metallic as to closely resemble gold, others red, violet, green, etc. Now and then we broke through the thin crust of a bubble, and although we could not repress a momentary shudder as we thought of what might be the result of a fall into the regions beneath, the stirring interest of the place drove away considerations of personal danger.

After two miles we came to a fearful crack about three or four miles wide, and so deep we could not see the bottom, but still there was no sound that we did not make ourselves, and we could not see any fire. I was certainly disappointed in this, for I remembered the accounts of those who had seen all this plain in a melted state. As we came near the Lua Pele, however, we found a black cone some twenty-five feet high, with a bright spot at its summit. There was fire at last, but we pushed on over the loose slabs, and through the steam, until suddenly we stood on the brink of the lake of lava, some seven hundred feet long, five or six hundred feet wide, and perhaps thirty feet below us. The surface was covered with a dark crust, broken around the edges where the thick blood-like mass surged against its banks with a dull sullen roar. The sulphurous vapors which rose from its surface were blown away by the wind, so that we could approach the very brink on the windward side, but the heat was so great that we had to hold our hands before our faces. The walls on which we stood and where we intended to sleep, were thickly covered with Pele's hair* which we saw constantly forming. The drops of lava spattered out as the waves dash against the walls, drawing after them a thread, or two drops spin out a thread between them like the finest "spun

*Pele was the Hawaiian Goddess of Fire whose home was in Kilauea.

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glass," and these broken threads are caught against the rough points of the cliffs and form a thick coating.

Occasionally a crack would open in the surface of the lake, and the white hot lava boil up through it in several places for a few minutes, and then turning red, and cooling rapidly, become black as before. A current would often set in toward the banks, and cake after cake breaking off from the crust be drawn in, causing a violent bubbling and spattering; and then this would cease, or run in another direction, but always from the centre to the edge.

As it grew dark we were very tired, having traveled since six o'clock in the morning, and hoping to wake up in the night when the fires would be more brilliant, we rolled ourselves up in our blankets, and, with our guides near by, went to sleep a few rods from the crater. At nine o'clock I waked, and as the night air was quite cold, moved to the very edge of the crater to warm myself, and enjoy the magnificent fireworks. The moon was up and almost full, but her light was dull beside the fires of Pele. Finding the place quite comfortable, I picked out a soft rock for a pillow, and went to sleep again. At twelve I awaked with a start and found myself in a shower of fiery drops, some of which were burning my blanket. I shook myself and jumped back, looking at my watch to note the time, and then stood gazing at the strange scene some time before I thought of my companions. The whole suface of the lake had risen several feet, and was violently boiling and dashing against the banks, throwing the white hot spray some sixty feet over the upper banks, causing the providential rain that awakened me to see this grand display. There was no thundering or bellowing, only the splash of the waves as they fell back, or the rattling of the cooled drops on the upper banks. The light was so intense as to be almost painful, as the crust had wholly melted, and brilliant fountains of fire covered the surface.

When I could think of any thing else, I called the others, but only succeeded in awakening the guides, and just then a drop of lava came plump into a greasy newspaper we brought our

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supper in, and it blazed up suddenly, to the dismay of our guides, who, thinking that the volcano had broken out at our feet, at once fled to a safe distance. Failing to arouse them with my voice, I threw several handfuls of gravel at the sleepers, but without effect, and I had to climb down, almost blinded by gazing at the fire, and shake them roughly. When they at last reached the edge the action had greatly diminished, and in a few minutes more the dark crust covered the central portion, extending rapidly to the sides, and after watching the last crack close, we all went to sleep again. I was glad to see such distant flames, as their existence has been denied in volcanoes. They were blueish-green, and shot up in tongues or wide sheets a foot long.

In the morning we found it very misty, and the mist soon turned to rain. We went to the cone we had seen the night before, and climbing its spattered sides, looked into the hole in the top. We could see that it was white-hot within, but we were unable to excite it, although we threw in pieces of scoria, and poked it with our sticks. On the other side of the path was a cone, long and irregular, with many pinnacles from which much smoke issued. We got quite wet in climbing up the bank, and at seven o'clock were eating our breakfast in the grass house on the upper ledge.

A year afterwards I went to Kilauea. Many changes had taken place. Lua Pele was much larger, and two new pools had opened during the winter. The place where I slept last August had melted away, and I was obliged to camp in another place. The superstitions of the natives have always been greatly excited while in this crater, and I saw many reasons for it. As we walked towards the bright lake about dusk, I thought I saw two or three men walking to and fro on the brink, and asked my guide what strangers had been down into the crater. "Aole haole aka akua paha!" (It is no stranger, but perhaps a spirit) said the old man, so solemnly that I was startled. As the steam moved in the wind, it opened and brought to view the black cliffs beyond, and this we had taken

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for moving men, not reflecting that the forms must have been gigantic at such a distance from us. In ancient times the bodies of the chiefs who worshiped Pele were committed to this pit.

As we were sitting on the brink, a shrill shriek broke through the night air. We could see the black walls of the crater all around us, and between us and the pathway leading out, a line of watch fires, and I was quite as much impressed as my natives with the direful stories they had been telling me. The shriek was repeated, and it was evidently the utterance of a human being in great agony. Lighting the lantern we had brought for any emergency, we went slowly towards the place, until the shriek was uttered at our very feet. We hastily examined the cracks and called, but there was no answer, and all was still. We looked everywhere, finding no one, and turned to go back, thinking some poor kanaka, venturing down in the dark, had fallen into some crack, and at last died.

We had gone but a few rods when the shriek was repeated. The natives clung to me in mortal terror, but I insisted on going back, and placing the lantern on a rock, we sat down to await developments; it seemed as though the question, "are there any spirits present?" was quite superfluous. We sat more than five minutes in silence, and I could feel the poor fellows tremble as they sat close up to me. Then the shriek was repeated, but we saw the spirit that made it—a jet of steam—and my boys were encouraged.

The smaller lakes were close to the surface, and I could put my stick into the melted mass. It was strange to see how soon the lava cooled on the surface. As soon as it had ceased bubbling, I threw a small perfectly dry stick of wood into it, and it was more than fifteen minutes before it smoked much.

This last visit was in August, 1865, and ever since that time the action in the crater has been increasing, until the floor of this vast pit has risen nearly a hundred feet, and at times has been quite inaccessible, owing to the streams of lava flowing over the surface.

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LATERAL CURVATURE OF THE SPINE.

BY C. M. STANLEY DAVIS, M. D.

[Communicated for the St. Louis Medical Reporter.]

Few subjects have received more attention on the part of the profession, and none have been more barren of practical results, than the nature and treatment of lateral curvature of the spine. It has been known for centuries as a formidable disease. Mahon, in 1669, suggested that one set of muscles acting more vigorously than another, drew the spine to one side, thus giving rise to permanent curvature. Of comparatively recent writers, Bampfield entertains an idea that the disease was caused by a particular morbid state of the muscular fibres; Thompson, in a "Clinical Lecture on the Curvature of the Spine," says his experience led him to think the flacid condition of the muscles was due to an atrophied state of the fibres, brought on by want of exercise. Dr. Harrison's opinion was, that the cause of spinal deformity consisted in a peculiar disease of the ligaments, but he produced no pathological foundation for his theory. Stromeyer regarded paralysis of the respiratory muscles as the primary cause of ordinary lateral curvature. Dr. Little says that observation has convinced him that the debilitated condition of the inspiratory muscles on the concave side of the chest in lateral curvature is a secondary lesion. The doctrine of Delpech, of disturbed muscular antagonism, is still in vogue, and most surgeons have based their treatment on that cause; but Werner demonstrated that the muscular antagonism was a gross error, and in reality does not exist. In this assertion his experiments and physiological facts appear to bear him out. Another theory ascribes the disturbance of the equilibrium of the body as the cause of lateral curvature, as amputation, shortness of one limb, unequal weight on one side of the body, etc. Lateral curvature of the spine has been frequently supposed to depend upon that state of constitution known as rachitis; and appears to be connected with, or dependent upon, either the softened cartilaginous state of the osseous system usually met with in rickety children, or in the mollities ossium, or osteo-sarcosis of adults. Thus far

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it has been impossible to establish a generally acceptable cause for all forms of lateral curvature. The proximate cause appears to me to consist of debility of the muscles, and relaxation of the ligaments of the spinal column. The appearances met with on dissection indicate that interstitial absorption has occurred throughout the intervertebral substance, and particularly on the concave side of the curve. The ligaments, too, appear to be greatly attenuated, and the muscles of the convex side very considerably shrunk. This deformity exists entirely independent of any *disease* of the bones, ligaments, or muscles, the rachitic condition above excepted. It may arise: 1st—From any cause by which the motion of the lower extremities are rendered irregular in their actions; 2d—From general debility, or loss of tone simply, or general debility combined with or consequent upon a rachitic condition of the bones generally, with its attendant unhealthy state of constitution; 3d—Any occupation by which the muscles of one side or extremity are more frequently exercised than those of its fellows, such as nursing, etc; 4th—It may proceed from intra-uterine pressure, rheumatism, or it may be congenital. Out of 263 cases of disease of the spine noticed by Mr. Thomson, 240 were cases of lateral curvature to the right side; 12 were cases of lateral curvature to the left side, and 11 were cases of posterior curvature. These cases were met with in the proportion of 95 to 100; whilst among the working classes the proportions were nearly equal. M. Holmes Coote, surgeon to the Royal Orthopædic Hospital, registered in twelve months, thirty-one cases of curvature of the spine—twenty-three females and eight males; the youngest was six months, the oldest fifty-four years. Of these, lateral curvature was by far the most frequent, posterior curvature being next on the list, and anterior curvature the last.

Unfortunately, distortion of the spine is frequently overlooked in its earlier stages, and it frequently arrives at a very severe stage before any remedial aid is sought for. It generally comes on insidiously, and terminates at a more or less advanced stage, leaving the patient disfigured in a proportionate degree. Its

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progress is usually very gradual; it is rarely attended with pain, but merely with a sense of uneasiness, which is usually referred to fatigue of the muscles of the back. In fact in many cases of long-standing, the patient has never been sensible of any pain or uneasiness in the spinal column or its vicinity; and, except from the alteration of shape, the patient would be totally unconscious of the disorder. It is by no means an easy task for a person not well versed in the anatomical structure of the vertebræ to detect a slight curve in the lumbar region; and physicians are sometimes considerably puzzled to decide whether or not the spine is slightly deformed at this part.

Dr. Louis Bauer, who has had great experience in the treatment of deformities, says he has never observed in connection with lateral curvature any of those symptoms denoting a lesion of the spine, or any irritation of the spinal cord and its membranes, except a moderate attenuation of the body, and this only in the higher grades of deformity. "2d—It has not been traced to traumatic causes, which are apt to produce structural affections of the spine and its adjacent tissues; 3d—It does not occur at a period of life at which the spine is easily deranged, either by traumatic or constitutional causes; 4th—It occurs much more frequently among girls than among boys, being another evidence against a traumatic cause; 5th—It is much oftener the concomitant of wealth than of poverty; 6th—It is much more observed among the female population of large cities that in rural districts; 7th—It originates most usually at the time of puberty, and in young ladies whose sexual development is protracted, whose menstruation is either imperfect or has not as yet made its appearance; whose condition is feeble from rapid growth and confinement, and whose spine is endowed with an unusual degree of flexibility: from this condition we have, however, seen a few exceptions in girls of most unexceptional constitutional health, strength and maturity, in whom, however, the deformity never acquired any great extent; 8th—The boys whom we have seen afflicted with lateral curvature were almost invariably of delicate and florid appearance; tall

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and thin, with a highly flexible spine; 9th—Lateral curvature is remarkably rare among so-called scrofulous individuals; and in the tolerably extensive field of our personal observation, we have scarcely noticed one instance in which the patient manifested symptoms of constitutional affliction; 10th—Although many of our patients affected with lateral curvature were, in a moderate degree, asthmatic, yet we recollect *but one case*, a Southern lady of some thirty years of age, that suffered simultaneously from pulmonary phthisis; 11th—Lateral curvature prevails in the northern latitude of the temperate zone, and diminishes toward the tropics."

Undoubtedly, general debility is the most frequent cause of this deformity. Children for a few years are allowed unrestrained liberty in the exercise of their bodies; they are dressed loosely, and are not confined any length of time to any one position; but as soon as they are subjected to the confinement of a school, they are taught to observe a certain degree of restraint in all their actions. The young lady of sixteen must observe, in all her movements, a woman-like grace and dignity, and must studiously avoid all feats of sprightliness, as unbecoming her sex. And at an age when the bony structure of the frame is imperfectly developed, and the muscular system suspended in its action, they are shut up in a school or nursery, and due care is taken that not a breath of air shall blow upon them. The time which should be spent in active, outdoor exercise is passed away in reading, needle-work, house-work, or ill-ventilated manufactories. What is the consequence of this? The general health first suffers, the muscles become atrophied and flabby, the digestive organs become deranged, the bowels irregular in their action, and the seeds of disease often sown in some vital organ which puts a limited period to their existence. Under the present system, the women of our country must forever remain feeble, delicate, nervous, deformed, and diseased, making life an existence of suffering and trial. The infatuation for precocious accomplishments at the present day amongst females is, beyond all doubt, the main cause to which the prevalence of

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this distortion may be attributed. Young females who are compelled to carry a child about the greater part of the day, are frequent subjects of this deformity; the muscles attached to the side on which they carry the child become more fully developed, and consequently the balance of power between the two sets of muscles become destroyed. The first thing noticed is, that a young lady stand erect. There is an awkwardness in the whole figure and gait that at first does not seem referable to any one part in particular On a closer examination a curve in the spine is noticed, to one side or the other, and the shoulder on the side to which the patient leans, depressed. The scapula on one side seems more prominent, and shifted around on the convexity of the ribs, while the other has approached nearer to the middle line of the back. The part of the spine principally affected is the dorsal portion. As the disease advances, a counter-balancing bend in the opposite direction takes place in the lumbar region. When a patient, the subject of lateral curvature, applies for advice, the spinal column should be carefully examined, throughout its whole length. There may be ulceration in the lumbar region, accompanied by consecutive curvature in the dorsal region. As the curvature continues to increase, the distortion becomes more and more apparent; the trunk is shortened, the ribs are approximated from side to side, and protruded forward to increase the capacity of the contracted thorax. As the distortion increases, the viscera of the thorax and abdomen are more compressed and displaced, the functions suffer corresponding derangement, and the whole system becomes disordered.

Treatment.—This disease is less amenable to treatment than any other deformity; chiefly, perhaps, from the difficulty of applying to it a permanent and properly directed mechanical force. In the first place, all unnatural positions must be remedied: as standing on one leg, raising one shoulder in writing, drawing, etc.; of sleeping constantly on one side, with a high pillow; the use of stays, corsets, and every rigid article of dress, should be prohibited; the faithful observance of the laws

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of physiological hygiene should be attended to; free exercise in the open air, with light gymnastics, etc.

The following excellent rules are recommended by Bauer: "1. The exercises should, if possible, be taken in the open air, so as to obviate over-heating of the body, and to sustain respiration with a proper alimentary supply. 2. The exercise should tax the entire muscular system at once or successively, and not exempt one part or the other. 3. The exercises should preclude vertical pressure upon the spine. 4. They should be moderate and discreet, so as not to exhaust the physical strength. 5. They should alternate with rest in the recumbent posture upon a firm mattress or lounge"

If the spine is already deviating from the perpendicular, active exercises can not be practiced to a great extent without injury to the patient. A most useful exercise for young females who may have a slight lateral curvature, or a tendency to debility in the muscles of the spine, is the carrying a weight, such as a basket, on the head. This mode of treatment was suggested in 1723, by M. Andry, in his "Orthopædia," from observing the strength in the muscles of the back in milkmaids and flower-girls. The "anaplastic" movements of Werner are an excellent substitute for active exercise. The process should be reversed that produced the distortion. For curvature of the right side, we must establish the conditions for causing a curvature to the left. In the second stage, when the deformity has assumed a decided character, the recumbent posture should be taken, and to relieve irksomeness, a change of the bed with a couch, or a reclining arm-chair, will prove a comfort to the patient. Mechanical treatment is effected either by portable apparatus, which allows the patient to move about, or by mechanical beds, in which force is applied horizontally..

During a long period the mechanical bed was the only remedy in vogue for the treatment of lateral curvature. Says Mr. Wilson, in his admirable lectures at the College of Surgeons, in 1820, "Before instruments are applied to relieve one part of the body, assure yourself, by carefully studying the whole fabric,

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that they will not be productive of injury to other and perhaps more important parts; and ascertain whether it would not be better to adopt natural means of cure than to shackle nature by, and impose upon the patient, the crude imaginations of a zealous and perhaps half-informed mind."

Numerous spinal supports and corsets, invented by their manufacturer with the specific property of curing lateral spinal deformity, have at all periods been brought under the notice of the profession. The apparatus of Hossard, Pavernier's lever-belt, Buehring's reduction apparatus, Tamlin's, Adams', and Brodhurst's apparatus, and others, have been highly recommended. That of Buehring's I consider the most serviceable. As a general rule, the patient can discontinue the recumbent posture when the morbid flexibility of the spine has subsided, the deformity is reduced, and when in the erect position the spine shows no further tendency to deviate from the perpendicular. If necessary, a spinal supporter can be provided for day use, using the aparatus at night.

INFLUENCE OF MARRIAGE ON THE DEATH-RATE OF MEN AND WOMEN AT DIFFERENT AGES, IN SCOTLAND.

By James Stark, M. D., F. R. S. E.

It is now a proved fact that, in Scotland, males at all periods of life above fifteen years of age are cut off in higher proportions than females In fact a nine years' average shows that, at all ages, excepting from ten to sixteen years, when the female death-rate very slightly preponderates, males in Scotland die in a higher proportion than females.

Table 1 shows these facts; and the results may be thoroughly depended upon, as they are founded on a nine years' registration of the deaths — no death in Scotland escaping registration, and the people being extremely particular to register the exact age at death.

Taking that table as a whole, and comparing the deaths at each period of life in the sexes, it will be seen that the additional dangers to which females are liable during child-bearing do not cause their death-rate to rise so high as that of the males, who are exempt from all such dangers.

But a far more important inquiry, and one which has not

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hitherto been investigated, in consequence of the difficulty of procuring exact facts which could be depended on, is, What is the effect of marriage on male and female life? Is its influence, in so far as the death-rate is concerned, for good or for evil? Is its influence limited to the female, or has it also a marked influence on the duration of life in the male?

TABLE I.—*Mean annual Percentage of Deaths to the Population at different ages in Scotland during the years 1865 to 1863, inclusive.*

AGES.	PERCENTAGE OF DEATHS TO POPULATION AT EACH AGE	
	Males.	*Females.*
Under 5	6.238	5.686
5—10	0.924	0.892
10—15	0.501	0.513
15—20	0.731	0 663
20—30	1.006	0.817
30—40	1.077	1.021
40—50	1.888	1.186
50—60	2.099	1.771
60—70	3.033	3.308
70—80	9.410	8.266
80—90	20.011	18.075
90—100	37.700	36.325
100 and above.	39.652	41.979
All ages	2.216	2.023

So far as I know, no attempt has been made by any statist to trace the effects of marriage on the sexes. Even Quetelet, in his masterly treatise on Man, has not hinted that marriage has any influence on human mortality.

In a paper "On the Sanitary State of Edinburgh," which I published in 1847, both separately as a pamphlet, and in the *Edinburgh Medical and Surgical Journal*, I mentioned a fact which I had ascertained regarding this subject. From the mortality returns which at that time I procured, it appeared that the mean age at death of the married was 57 54 years, while that of the unmarried, above twenty-two years of age, was only 42.18 years. That result seemed so extraordinary that I was led to doubt the accuracy of the returns of the ages; but from that day to the present I have had no opportunity of following out the investigation.

In an inquiry like the present everything depends on the correctness of the returns from which the tables are drawn up; for if these returns were imperfect, either from not including the whole deaths, or from not specifying the ages and conditions, no trust could be reposed in the tables prepared from them. It is equally necessary, in an inquiry like this, that the census of the population should have been so accurately taken, as that the exact number of married and unmarried men and women, at every age of life, should be accurately ascertained. On all these points the Scottish statistics may be depended on, inasmuch as

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it is believed that almost no death escapes registration; and the Scotch are so particular in recording the exact age and condition of their departed relatives that every confidence may be placed in the accuracy of the registers. As to the census, that of 1861, on which the tables are founded, was prepared under my own eye, and wherever defective entries have been made, the registers were returned to the enumerators in order that the errors might be corrected, or the parties themselves were communicated with, in order that the abstracts might be as perfect and trustworthy as possible.

As it is necessary to inquire into the influence of marriage on the sexes separately, we shall begin with its influence on males.

I.—*Death-rate of Married and Unmarried Men.*

Table II is drawn up with the view of showing the influence of marriage on the male sex in Scotland; and it may be stated once for all that all the widowed are necessarily included among the married, and the ages are grouped into quinquennial periods for the sake of easy reference and more accurate comparison.

TABLE II.—*Married and Unmarried Men at each quinquennial period of Life in Scotland in 1863; the Deaths at the same Ages; and the Percentage of Deaths to the Living at each Age.* (*Year 1863.*)

AGES.	HUSBANDS AND WIDOWERS.			BACHELORS (unmarried.)		
	No. Living.	*Deaths*	*Percentage.*	*No. Liv'g*	*Deaths.*	*Percent.*
20 and under 25	22,946	137	0.597	108,587	1,251	1.174
25—30	54,221	469	0.865	48,618	666	1.369
30—35	66,153	600	0.907	25,962	383	1.475
35—40	63,358	690	1.089	15,857	253	1.595
40—45	62,645	782	1.248	12,311	208	1.689
45—50	54,506	869	1.594	8,824	179	2.029
50—55	49,691	880	1.774	7,636	205	2.684
55—60	38,006	929	2.444	5,660	142	2.558
60—65	35,920	1,216	3.385	5,242	237	4.380
65—70	22,021	1,184	5.149	2,848	156	5.477
70—75	16,029	1,291	8.056	2,021	205	10.143
75—80	9,716	1,135	11.681	1,081	157	14.543
80—85	5,477	953	17 400	513	101	19.688
85—90	1,708	488	28.571	151	32	21.192
90—95	449	137	30.512	50	21	42.000
95—100	103	40	38.835	6	3	50.000
100 and above	28	15	53.571	3	—	—
Not stated	—	4			5	—
All ages	503,376	11,769	2.338	243,259	4,194	1,723

Table II is a very remarkable one, and the results quite startling as to the immense difference between the mortality of the married and the unmarried. By that table it appears that at every age from twenty to eighty-five the death-rate of the married men is much smaller than that of the unmarried. After the eighty-fifth year of life the numbers are too small to afford the means of accurate comparison, unless they had been extended over a series of years. Thus, reading the tables without the

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decimals, so as to make it more easily intelligible, of every hundred thousand unmarried men between the ages of twenty and twenty-five years, 1,174 died during the year; but of a like number of married men only 597 died, or just one-half the number. In other words, between the ages of twenty and twenty-five years the death-rate of bachelors was exactly double that of the married men.

As the age increases, this difference in the death-rates of the married and unmarried decreases; but it decreases slowly and regularly, showing a marked difference in favor of the married man at every period of life. Thus, at the ages of twenty-five to thirty years, when the number of married and unmarried men in Scotland is pretty nearly equal, of every hundred thousand bachelors 1,369 died during the year; but in an equal number of married men only 865 died. At that period of life, also, the death-rate of the bachelor very greatly exceeded that of the married man.

Between the ages of thirty and thirty-five, while in every hundred thousand bachelors 1,475 died, only 907 died out of an equal number of married men.

We need not go in detail over every separate age; but between the ages of forty and forty-five years, while 1,689 died during the year out of every hundred thousand bachelors, only 1,248 died out of an equal number of married men. At the ages sixty to sixty five years, while 4,330 died out of every hundred thousand bachelors, only 3,385 died out of a like number of married men. Even at the age seventy to seventy-five years, while only 10,148 died during the year out of every hundred thousand bachelors, only 8,055 died out of a like number of married men. Nay, even at the extreme age eighty to eighty-five years, while 19,688 died during the year out of every hundred thousand bachelors, only 17,400 died out of a like number of married men.

Here, then, we have the remarkable fact, for the first time proved by trustworthy statistics, that the influence of marriage on the male mortality is of the most potent kind; that, in fact, the bachelor life is much more destructive to the male sex than the most unwholesome of trades, or than a residence in a house or district where there is not the most distant attempt at sanitary arrangements of any kind.

This fact is rendered still more striking if we calculate the mean age at death of the married and the unmarried men. If we reckon the whole married and the whole unmarried in the above table, viz, from twenty years to the close of life, we find that the mean age at death of the married men was 59 7-10 years; whereas the mean age at death of the bachelors was only forty years. Reckoning from the twentieth year of life,

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therefore, married men have a chance of living nineteen and one-half years longer than those who remain bachelors.

In the general population, however, about the twenty-fourth year of life the number of bachelors and married men is about equal. It will, therefore, afford a more unexceptionable average if we strike from the table all persons under twenty-five years, and calculate the mean age at death from the twenty-fifth year to the close of life. When this is done, it is found that at death the mean age of the married men was 60 2-10 years, while the mean age of the bachelors was only 47 7-10, giving twelve and one-half years in favor of the married.

This is a remarkable fact, and apparently a special provision of nature to protect the father of a family, in order that he may provide for his offspring and superintend their rearing. It is quite true that this special protection from death is based on fixed laws of nature, by which we see that the generally quiet and regular life of the married man secures him from falling a victim to diseases, to which the more irregular and often more dissipated life of the bachelor renders him prone. It is, nevertheless, a wise and special provision of nature, and as such merits notice.

But this new fact in statistics seems to explain some things which were formerly unintelligible. For instance, it has been found quite impossible to reduce the mortality of the army, even when in barracks, and not on active service of any kind, to the mortality of civil life — however perfect were the sanitary arrangements in the barracks, and however much attention were paid to the food, clothing and exercise of the men. The above proved fact fully accounts for this. Sanitarians, in their ignorance of the powerful influence of marriage on the male mortality, were comparing the death-rate of the unmarried soldier with that of both married and unmarried in civil life. Whereas the mortality of the soldier ought to have been alone compared with the death-rate of bachelors in the civil population, and not even with that of the whole bachelors in the population, but with the mortality of bachelors living in towns, who we know die at a much higher rate than those living in the rural districts.

No one can look at the above table without seeing the immense saving of life which would result were all the bachelors above twenty years of age to marry. This would tell especially on the population of Scotland, where a much larger proportion of the marriageable males are bachelors than even in England or America.

To insurance companies, however, a table like the above ought to be invaluable, because it points out to them an unsuspected source of danger, whose influence for evil is as great as

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vicious habits or the existence of organic disease, or descent from a scrofulous or consumptive family.

The facts, however, which are elicited by this table are of even greater value to the statist, and to the inquirer into the sanitary condition of, or the death-rate effecting, persons engaged in different occupations and trades. This table of itself proves that almost all the conclusions hitherto published on this subject, and which were founded on the general mortality prevailing among men following different occupations, are erroneous; and that any deductions founded on a comparison of the whole number dying annually in any occupation, with the total number of persons following that occupation, are only a propagation of error. Let us exemplify what is meant by this statement

In Table II it was seen that at every several quinquennial age the death-rate of the married man was greatly below that of the bachelor. One would naturally expect, therefore, that a comparison of the total death-rates at all ages of the married and unmarried would show the same conclusion; in fact, one would naturally expect that the summary of the death-rates of each class at all ages would be found to correspond with the death-rates at each age. The very reverse is the case. The summary of the table contradicts the results of every separate quinquennial period, and makes it appear that bachelors at all ages are only cut off at the rate of 1,723 annually in every hundred thousand living; where the married men were cut off at the rate of 2,338 deaths annually in every hundred thousand married men.

Every one can at once see that this is a false conclusion; because if at every several year of life bachelors die in a much higher proportion than married men, it must be the same during the whole period of life. How, then, is the false result produced?

The anomaly is at once explained by looking either at the number living or dying at each age. Half of the whole number of bachelors in Scotland are between the ages of twenty and twenty-six years; and, in consequence of this, the annual deaths, though very low to what they are at more advanced years, bulk so largely as compared with the deaths at all other ages, that when the whole deaths are thrown together the general mortality of the bachelors seems to be but little higher than it was at the earliest period of life from which we enumerated them, viz., twenty years. It is quite otherwise with the deaths among the married men. With them, instead of the greatest number of deaths, in any quinquennial period, between twenty and twenty-five years of age, by far the greatest number of deaths occur at the three quinquennial periods from sixty to seventy-five years, at which period of life the mortality is high. Summing the

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columns, therefore, and comparing the total deaths at all ages with the total living in each class, necessarily leads us to a false conclusion. The comparison, to be correct, must be limited to that of the mortality at each several age.

It is, however, this very erroneous conclusion which pervades all the tables and papers which have been published as to the varying death-rates affecting persons following different occupations and trades, where the deductions have been based on the annual deaths in the total number of persons belonging to each occupation or trade. Such deductions not only give no correct information on the point which they profess to investigate, but they give false conclusions; and the truth is, perhaps, the very opposite of what it is supposed to be.

Let us take an example from a table published by one of the best statists of the present day, who is as renowned for his caution as for his ability in dealing with statistical inquiries, my friend, Dr. William Farr, of London.

All males in England, fifteen years of age and upwards, are cut off at the rate of 1,816 deaths annually in every hundred thousand males at the same ages. If this gave an approximation to the mortality of the males above fifteen years of age, we ought to find that persons who follow notoriously unhealthy trades should be cut off at a much higher ratio; whereas persons who follow notoriously healthy out-of-door occupations ought to exhibit a very much lower mortality.

Dr. Farr, in the Supplement to the Registrar-General's Twenty-fifth Annual Report, published a table professing to give the first fruits of the official investigation as to the mortality of the trades and occupations in England, restricting that table (XXIV) to sixteen selected occupations, and we are quite entitled to conclude that these occupations were selected for the purpose of showing the value of such an inquiry, and the light it threw on the death-rates of each trade or occupation. To what conclusions, then, do his published deductions lead?

It is quite notorious that one of the most unhealthy occupations in which man can engage is that of baker and confectioner. But, by the table referred to, it would appear that, at all ages above fifteen years, bakers and confectioners were only cut off at the rate of 1,617 deaths annually; that is to say, at a much lower rate than the males of all England at the same ages.

It is equally notorious that men working in the copper, tin and lead manufactories are cut off at a much more rapid rate than the general population; in fact, these trades are notoriously unhealthy. By the table referred to, however, that class of workers would appear to be extremely healthy, seeing that only 1,220 deaths occurred annually in every hundred thousand following these occupations—a full third fewer deaths than in the general male population of all England at the same ages.

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It is equally notorious that agricultural laborers, out-door workers, shepherds, &c., are the most healthy class of men in Great Britain; but by the table above referred to they are made to be more unhealthy than butchers, bakers, grocers, shopkeepers, miners, workers in copper, tin and lead and blacksmiths; for, by that table, it appears that, at all ages above fifteen years, 1,736 die annually in every hundred thousand persons.

If from that table we turn to the extended tables themselves, in which the deaths from each trade, profession and occupation are given, the same fallacious result appears when we compare the total annual deaths with the total number of persons following the pursuit. There is, for instance, not a more firmly established fact in vital statistics than this, that the clergy are the most healthy and long-lived of men. But by making the comparison as above indicated, they would appear to be the most unhealthy class of all, seeing that 1,820 persons die annually out of every hundred thousand at all ages. Officers of the National Government, physicians, surgeons and druggists, all equally healthy professions, would by such comparisons appear to be equally unhealthy occupations as that of the clergy, for in every hundred thousand officers of the National Government 1,818 died annually, while of physicians, &c., 1,701 died annually.

By this false mode of comparison, therefore, clergymen, physicians and government officers, who have been proved to enjoy better health and to live to a much greater average age than the other professions, trades and occupations, are proved to have a higher death-rate than the most unhealthy trades.

All such deductions are false, as is satisfactorily proved by Table II. The mistake arises from comparing things which are not comparable. The comparison, if made with the population following the occupation or trade, must be made with the respective trades at each several age of life; or, better still, by finding out the average age at death, which can lead to no fallacy.

Dr. Farr must have felt himself staggered by the evidently unexpected and manifestly erroneous results brought out by comparing the total deaths with the total numbers following each profession. This is manifest from the fact that he offers no comments on the tables having reference to the comparison of the death-rates affecting the sixteen selected professions; and also from the fact that he gives an extra table arranging the deaths of these selected trades in their order of least mortality, taking the ages of forty-five and fifty-five years. He gives no explanation why he selected that age to show such a fact rather than the mortality at all ages.

The above facts, then, prove how careful we must be in deducing conclusions from statistics. Figures of facts, provided they are correctly drawn up, are necessarily truths; but they do not

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necessarily lead to true conclusions. On the other hand, as in the above-noted instances, they may lead to conclusions the very opposite of the truth. In fact, it is a much more difficult thing to arrive at a truth than most men imagine; and perhaps more difficult in vital statistics than in most other sciences.

II.—*Death-rate of Married and Unmarried Women.*

The deaths of the married and unmarried women of Scotland at each quinquennial period of life were abstracted for two consecutive years, and the results are given in Tables III and IV.

TABLE III.—*Number of the Living, and Deaths of the Married and Unmarried Females in Scotland, at different Ages, in 1862; and the Percentage of Deaths to the Population at each Age; also the proportion for 1861.*

AGES.	MARRIED AND WID'D WOMEN IN 1862.			Percent of married deaths in 1861.	MARRIED WOMEN IN 1862.			Percent. of unmar'd Deaths in 1861.
	No. Living.	Deaths.	Percent of Deaths		No. Living.	Deaths.	Percent of Deaths.	
15 and under 20	3,384	25	0.738	0.983	154,829	1,075	0.694	0.691
20—25	39,924	364	0.912	0.910	144,180	895	0 783	0.788
25—30	71,649	683	0.953	0.928	61,044	566	0.829	0.903
30—35	77,593	764	0.985	0.927	34,954	367	1.049	0.941
35—40	71,992	806	1.120	1.116	24,368	300	1 231	1.181
40—45	69,660	806	1.171	1.116	19,690	225	1.142	1.109
45—50	58.934	785	1.332	1.270	14,659	222	1.507	1.455
50—55	54,479	826	1.516	1.449	13,973	269	1.926	1.576
55—60	41,462	886	2 136	1.989	10,216	244	2.389	2.077
60—65	42,390	1,200	2.830	2.649	11,405	370	3.244	2 715
65—70	26,242	1,242	4.732	4.269	6,875	350	5.090	4 489
70—75	20,337	1,342	6.549	6.627	5,544	434	7.828	6.672
75—80	12,190	1,424	11.681	10.448	3,230	359	11.114	9.741
80—85	7,490	1,278	17.062	15 105	1,986	332	16.717	16 236
85—90	2,946	708	28.757	23 179	582	161	27.663	25.697
90—95	763	282	36 972	32.147	181	55	30.386	39.778
95—100	203	94	46.305	36.138	48	20	41 666	35 416
100 and above	34	17	50.000	50.000	23	3	13.042	26.087
Age not stated	—	11	——	——	—	3	——	——

TABLE IV.—*Mean Annual Percentage of Deaths Among the Married and Unmarried Women of Scotland, at Different Ages, During the Two Years of 1861 and 1862.*

AGES.	PERCENTAGE OF DEATHS.		AGES.	PERCENTAGE OF DEATHS.	
	Married and Widowed.	*Unmarried Women.*		*Married and Widowed.*	*Unmarried Women.*
15 and under 20	0.860	0.692	60 and under 65	2.739	2.979
20—25	0.911	0.783	65—70	4.500	4.789
25—30	0.940	0.866	70—75	6.588	7.250
30—35	0.956	0.995	75—80	11.064	10.427
35—40	1.118	1.206	80—85	16 068	16.476
40—45	1.143	1.125	85—90	24.968	26.630
45—50	1.701	1.481	90—95	34.559	35.082
50—55	1.482	1.751	95—100	41.221	38.541
55—60	2.062	2.232	100 and above.	50.000	19.064

In Table III the actual number of the married and unmarried women living in Scotland at each quinquennial period of life at the middle of the year 1862 are given, the deaths during the

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same year, and the proportion of deaths to the living. For 1861, however, two columns are alone given, showing the proportion of deaths in the married and unmarried women during that year, for the sake of affording the means of easy comparison with the results of 1862. By that table it will be seen that, though the proportion of deaths among the married and unmarried women at each age differed slightly during each year, there is no difference whatever as to the results of the comparison between the death-rates of the married and unmarried at each age, for excepting at the extreme ages of eighty to eighty-five, and against ninety to ninety-five, when the numbers are too small to give constant quantities, the results of both years are absolutely identical. This almost unexpected result confirms the general correctness of the tables prepared for each year, and shows that the facts brought out by these tables may be depended on as demonstrating what may be called the law of nature on the subject. Our remarks may, therefore, be limited to Table IV, which gives the mean result of the two years.

When the mean annual per centage of deaths in the married and unmarried women at each quinquennial period of life is compared, it is found that the married die in a higher ra'io during the three quinquennial periods of life, fifteen to twenty, twenty to twenty-five, and twenty-five to thirty years; but that during the next two quintennial periods, viz.: from thirty to thirty-five, and from thirty-five to forty years, during which half of the children are born, the married die at a lower rate than the unmarried.

At the age when the usual "change of life" occurs, viz. between forty and forty-five years of age, the mortality of the married woman slightly exceeds that of the unmarried;—a result which might have been expected, seeing that the fatigues of child-bearing, and nursing, and the harder labor connected with the rearing of her family, somewhat weakens the system, and renders that critical period of life more trying to the married than the unmarried woman.

From forty-five years to old age, that is to seventy-five years, the married women die in smaller proportion than the unmarried; but above that age the numbers are too small to afford any basis for conclusions, though by the tables the chances are still in favor of the married women from eighty to ninety-five years of age.

It will be seen that at every quinquennial period of life the difference between the death-rates of the married and unmarried woman is very much less than that between the married and unmarried men. It is thus demonstrated, for the first time, that marriage exerts a much more powerful influence on the male than it does on the female; for whereas the influence of mar-

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riage on the female death-rate is comparatively trifling, it is of the most marked and potent kind on that of the male. The common belief has always been the reverse of this. The common belief has always been that marriage, by adding to the female the additional dangers of child-bearing, would be found to increase her mortality; but it was never even once suspected that it would make any difference in the mortality of the male. These facts, however, whose correctness there is no denying, disprove all this, and prove that marriage exerts a much more powerful influence on the mortality of the male sex than all imagined sanitary improvements could ever hope to effect.

To return to our table. It was seen that at the three quinquennial periods, fifteen to thirty years, married women died at a somewhat higher rate than the unmarried. Thus from fifteen to twenty years in every hundred thousand married women, 860 died annualy; whereas in a like number of unmarried women, only 692 died. From twenty to twenty-five years of age, of every hundred thousand married women, 911 died annually; whereas in a like number of unmarried women, only 783 died. From twenty-five to thirty years of age, in every hundred thousand married women, 940 died; whereas in a like number of unmarried women at the same ages, only 866 died.

During the next two quintennial periods of life, however, the married women died in a lower ratio than the unmarried. Thus from thirty to thirty-five years of age, in every hundred thousand married women, 956 died annually; but in a like number of unmarried women at the same age, 995 died annually. From thirty five to forty years of age, in every hundred thousand married women, 1,118 died annually; but in a like number of unmarried women at the same ages, 1,206 died.

As nearly half of the children who are brought into the world are produced by mothers thirty years of age and upwards, it is worth while to ascertain why it is that the mortality of the married under thirty years of age is higher than that of the unmaried under thirty; while the death-rate of those bearing children above thirty years of age is less than that of the unmarried. The fact that the death-rate of the married women from thirty to forty years is lower than that of the unmarried, proves of itself that it is not mere child-bearing which increases the mortality of the married women under thirty years of age. Yet it must be connected with child-bearing, else the mortality would have remained as low as in the unmarried. For this cause we have not far to seek.

Every medical man knows that the risk to the mother is far greater at the birth of her first child than at any subsequent delivery; and it is extremely probable that the whole extra mortality of the married female under thirty years of age, may

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be caused by the greater dangers which attend the birth of her first child. Indeed this may be considered to be demonstrated by the following considerations and facts.

In the Second detailed Annual Report of the Registrar-General of Scotland, viz: for the year 1856, a table was given, showing the ages of all the women in Edinburgh and Glasgow who gave birth to children in 1855, and also the number of children to which each woman had given birth.

TABLE V.—*Number of Mothers in Edinburgh and Glasgow in 1855; the number of these who were confined with their first Child, and the proportion per cent. of Mothers who bore their first Child.*

Ages of Mothers.	*Total Number of Mothers.*	*Number of Mothers bearing their first Child.*	*Proportion of Mothers bearing their first Child to every 100 Mothers at each Age.*
15 to 20 years	403	354	87.8
20—25	3814	1921	50.3
25—30	5057	1019	20.1
30—35	3943	331	8 3
35—40	2395	124	5.1
40 and above	961	32	3.3

Table V. is prepared from that table, and it shows the proportion of mothers at each quinquennial period of life who bore their first child at these respective ages. That table at once demonstrates that the higher mortality of the married women between the ages of fifteen and thirty years, is solely due to the superadded dangers which attend the birth of the first child. Thus between fifteen and twenty years of age, eighty-seven per cent. of the mothers gave birth to their first child. From twenty to twenty-five years of age, fifty per cent. of all the mothers who were confined gave birth to their first child; while from twenty-five to thirty years of age, twenty per cent of the mothers gave birth to their first child. Above that age the proportion of women giving birth to their first child was quite trifling, gradually diminishing from eight to three per cent.

It was only, then, at the ages when a very large proportion of the married women were giving birth to their first child, that the death-rate rose higher than that of the unmarried women. but the moment that age was attained when the great majority of women had got over the birth of their first child, viz. thirty years, the mortality fell even below that of the unmarried women. This seems clearly to prove that it is bearing the first child which causes the higher mortality of mothers between fifteen and thirty years of age. In fact, the table seems to prove that after the birth of her first child, the married woman, even from fifteen to thirty years of age, has an equal chance of life with her unmarried sister, and after she has passed her thirtieth year, and during the whole of her remaining child-bearing

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period, has a better chance of life than the unmarried woman.

Seeing these things are so, there is nothing to prevent the higher mortality of the married woman under thirty years of age being quite arrested Medical men all know whence the dangers of the first birth arise. The causes are almost entirely removable. They are causes almost wholly due to our civilization and faulty habits, which produce an over-excitable, unduly stimulated, yet worn-out frame, where health and vigor ought alone to exist.—*Boston Medical and Surgical Journal.*

IS THE WATER WE DRINK GOOD AND WHOLESOME?

It is very clear that a complete and satisfactory answer to this question cannot be founded upon chemical analysis alone. By this means we can ascertain the amount of inorganic matter in the water with great accuracy, and as far as the elements are concerned we can determine what such matter consists of. We can also show the influence of the inorganic or mineral constituents of the water in decomposing soap, and in other ways affecting its use for certain domestic or manufacturing purposes. It is but rarely that the mineral constituents of water from any of the ordinary water supplies are such as in any way sensibly to affect the health of those who drink it. In a sanitary point of view, therefore, the inorganic or mineral constituents of drinking-water are looked upon as comparatively,if not wholly, unimportant. It is organic impurity, and products resulting from its decomposition, that give to water the qualities most to be feared by those who drink it, and here, unfortunately, chemistry does not aid us very much. It does, however, afford us some insight into the general nature of the organic impurity that is, or has been, present in the water. We can determine, within certain limits, the amount of organic matter, not so accurately as we can determine the inorganic constituents, but sufficiently so for practical purposes. We can ascertain the presence or absence of nitrogen and sulphur in the organic matter, and thus judge of its animal or vegetable origin. Even if organic matter be wholly or almost wholly absent, we may discover products of its decomposition in the forms of ammonia or nitric acid, from which it may be concluded that there is a connection somewhere between the water and organic impurity, and that although the latter has been rendered harmless by its decomposition, slightly varying conditions might present it in a less advanced state of decay, in which it would be decidedly deleterious. Other products of decomposition, such as sulphuretted hydrogen, would of course bespeak the necessity of avoid-

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ing its use, but this makes a direct appeal to the senses which hardly requires to be verified by chemical analysis.

But when the chemist has done his utmost through the exercise of his art, he can only represent, and that approximately, the quantity of organic matter, say one, two, or four grains in a gallon, and, by a more refined application of his art, the presence or absence of nitrogen in this matter. Beyond this he can not specify its particular nature, source, or condition. The quantity is too small and the task too difficult to admit, in an ordinary analysis, of its examination being carried even as far as the available means of the chemist extend. The result of analysis are therefore usually expressed in very general terms.

All water employed for domestic purposes contains some organic matter, and if, as is stated, "it is not the quantity of organic matter in water so much as its quality which determines its dangerous properties," what is the value of analysis in such a case, seeing that by this means the quality can not be ascertained? Undoubtedly, taken alone, and in the form in which the results are usually expressed, analysis does not go for much, but it does nevertheless afford some assistance in judging of the extent to which the water has been exposed to the polluting influences of decomposing matter. This is, perhaps, of more value as a guide with reference to the dietetic use of water under ordinary circumstances than with special reference to cholera or other contagious diseases. In these cases we are told that modern pathological science has almost demonstrated that the real agents of such diseases are *living germs*, which the most refined appliances of the chemist have failed to discover, which chemical analysis can not therefore indicate, and with reference to which no system of filtration can be depended upon for their removal.

In answering the question we have assumed to be put, we should neither wholly neglect nor exclusively rely upon the results of chemical analysis, but should bring to bear upon the subject every available means of ascertaining the past and present conditions to which the water has been subjected, so that we may draw our conclusions from that which is unseen as well as from the results of direct experiment.

Thus, the exercise of common sense in the investigation of the conditions to which the water has been exposed, aided by the results of analysis, and some knowledge of physiological investigations and the laws of nature, will lead to the following conclusions with reference to this matter:

1. All water that has received drainage containing animal and vegetable matter in a state of putrefactive decomposition, and especially excrementitious matter, either is, or is liable to be, in a state unfit for use as drinking-water, and the

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chemist can not determine by analysis whether the dangerous state exists or not.

2. All rivers necessarily receive drainage, and they are generally contaminated with sewerage and other decomposing organic matter which may render the use of such water injurious to health.

3. Shallow wells situated in large towns are subject to pollution from infiltration, from leakage of sewers, and other similar causes, and as these waters are stagnant, the organi cmatter present, if it has not passed, is liable to assume its most dangerous condition.

4. Spring water, when favorably situated, is free from suspicion of its containing organic impurity that could prove injurious to health.

5. Rain water, if properly collected and stored, is the best and safest water to use for domestic purposes, and especially for drinking.

6. In the absence of rain water or good spring water, the best and most palatable water should be selected from other sources, choosing that which is most free from organic matter, and which has been least exposed to sewerage contamination. In order to guard as far as possible against the influence of living germs, by which it is supposed that disease may be propagated, it is recommended on the highest authority that when water to which a suspicion attaches is used for drinking purposes, it should be previously boiled, the heat of boiling water being destructive to the vitality of such germs. A supply sufficient for the day should be daily submitted to the boiling temperature, and this after it has cooled may be rendered more palatable by the addition of a little syrup of lemon, or even a few drops of diluted sulphuric acid.—*London Journal of Pharmacy:*

THE MEDICAL REPORTER.

ST. LOUIS, APRIL 15, 1867.

BIBLIOGRAPHICAL NOTICES.

MEDICAL REGISTER OF THE DISTRICT OF COLUMBIA, 1867, embracing notices of the Medical, Benevolent and Public Institutions of Washington, D. C. By J. M. Toner, M. D.

We are under obligations to the author for a copy of this very interesting and useful little work. Its design is "to give information of all medical societies, colleges, hospitals and infirmaries, with brief notices of public and private benevolent

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institutions, libraries, etc., and the names of the officers and physicians in charge," in the District of Columbia. It is not only of use to the residents of that locality, but must be of great service to the visitor; we wish some of our professional brethren in St. Louis would initiate a like enterprise; we are sure it would be well received, and the labor in its compilation well repaid. Dr. Toner certainly deserves the encouragement of the profession in his efforts in their behalf.

In this connection, we would call attention to the proposed Biographical Dictionary which Dr. Toner is engaged upon. It is intended to be a national work, giving the lives of deceased American physicians. The author has already collected and arranged "sketches of the lives of more than two thousand physicians," and he has on hand material embracing "the names of at least ten thousand physicians." We hope to see a standard work of this kind, for at present we have nothing which can be called a Dictionary. Every assistance should be given to one who has thus voluntarily undertaken so vast a labor; and all praise is due to him for his interest in the profession. He desires information from all sources to aid him in his work; we know than many valuable biographies could be obtained here, and we call upon the older members of the profession in St. Louis to collect the material. By addressing Dr. Joseph M. Toner, No. 350 Pennsylvania avenue, Washington City. Circulars will be forwarded, which will much facilitate the compiling of such papers, and with such aid, we are in duty bound to lend a helping hand.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, at the Fourth Annual Meeting, held in Detroit, Michigan, August, 1866. Also, the Constitution and roll of members.

We have been long in receipt of this valuable Report, and have delayed its notice from the press of other matters. We take occasion to say that the results of the labors of the druggists at the meeting of their Association equal, if they do not surpass, in positive knowledge, the observations of the physicians in their annual meetings.

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Their minutes are an exhibition of much cordiality of feeling among the members, and an earnestness of purpose which can not be too highly commended. The Reports of their Committees are full of interest, and their Special and Volunteer Reports and Essays can not be surpassed in the amount of labor and observation and talent therein displayed. It is well worth the physician's time to examine into this work—he will gain very much of practical utility in his daily avocation.

The next annual meeting of the Association will be held in New York, on the second Tuesday in September, 1867.

Professor Horatio R. Storer, of Boston, Mass.—We beg leave to call the attention of our readers to the advertisement of Professor Horatio R. Storer, of Boston. He proposes to give a course of twelve lectures on the Diseases of Women, commencing June 1st, proximo. This is a move in the right direction; and we are glad to see from year to year evidences of the inclination on the part of distinguished medical men to teach certain branches of medicine as specialties, not in opposition to medical schools, but in conjunction with them, and to the great advantage of the student, who will be thus able to procure the knowledge, which can not be but very general as acquired at college. Probably this teaching of specialties is to be one and a very important method of reform in medical education; the profession has reached the point of recognition of the specialist, and it requires but one more step in order to give him that authority to teach, which is now assumed and retained by colleges alone. We hope soon to see this method of teaching more general; no fear need be entertained of private teachers becoming too numerous, for they will succeed or fail according to their merits, just as we now begin to see only those medical colleges bearing the palm whose corps of instructors have some claim to the title of professor.

We are acquainted with Dr. Storer, and know him to be not

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only capable, but pre-eminent on the subject which he professes to teach. His labors have been extensive in this direction. Commencing as an assistant in practice in 1854–'55, with Prof. Simpson, of Edinburgh, whose Obstetric works he assisted in editing, he has probably contributed in his time as much if not more to obstetrical science than we shall find in the lives of many older men in the profession. His writings are known to us through the journals, and the transactions of societies and the American Medical Association, and we know of no one more equal to the task which he has set before himself.

We unhesitatingly recommend the follower of medical science to embrace this opportunity as set forth by the advertisement, even if it be at the sacrifice of a similar course of lectures at a medical college.

The American Naturalist.—We welcome with no ordinary pleasure the first number of this excellent work, filled, as it is, with interesting and useful matter. It will be devoted to Natural History, Geology, Zoology, Philosophy, etc., etc., and will be a valuable work for all persons and of all professions By the kind permission of the editors we republish the article on the Volcano of Kilauae, which is a fair sample of the work which is published under the auspices of the Essex Institute, Salem, Mass., at the low price of $3 per annum, or 5 copies for $13. Those of our friends who wish to subscribe we shall be pleased to forward their subscriptions, and a specimen copy can be seen at our office. We return our thanks to the editors of the *Naturalist* for the permission to republish their article on the Volcano of Kilauae, as well as for the use of the plate which embellishes this number. We heartily wish them that success which their work so justly deserves, and shall be at all times pleased to return any favor in our power.

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Humboldt Medical College.—The first Annual Commencement of this institution took place at the hall of the Polytechnic Institute on the evening of April 11th, in the presence of a large and appreciative audience. The Dean of the Faculty, Professor A. Hammer, opened the ceremonies with a few interesting remarks, stating that the exercises would be conducted on the old and time-honored plan of requiring the candidates to defend the subject matter of their Thesis in public, and called on members of the profession present to propose questions and ask explanation of the several candidates as their names and subject of Thesis was announced.

The following gentlemen were then severally introduced, and received their Diplomas:

Thomas Hamill, Subject of Thesis: Superiority of cold water dressing for wounds.

William Munroe, Subject of Thesis: Treatment of typhoid fever.

Charles S. Rohlfing, Subject of Thesis: Cholera is not contagious by direct contact.

Hermann Staudinger, Subject of Thesis: There is no such disease as pyæmia.

We were much pleased with the able and interesting manner in which the candidates maintained the subject of their Thesis, giving evidence of much study and thought. We were also pleased with this public manner of showing the proficiency of the graduates. The Honorary Degree M. D. was conferred on F. H. McArdle.

Dr. G. M. B. Maughs delivered the Valedictory Address. Subject, Persistence of Matter and Force.

The learned Professor showed in his disposition of his subject metaphysical as well as medical research.

We congratulate the faculty on the successful results of their first course, and trust they will long continue in their career of usefulness.

Prof. A. Hammer, of the Humboldt Medical College, has accepted an invitation from a number of physicians to deliver a course of lectures on Pathological Anatomy in this city, commencing about the 10th of May.

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Drs. Peebles & Eames, Dentists.—We were much pleased with a visit to the rooms and laboratory of these gentlemen. As dentists they deservedly stand at the head of their profession. They are prepared to do all work in their line with promptness, and of a quality unsurpassd.

We are also pleased to see that dentistry has advanced to the place it justly deserves as a branch of the curative art, and now that a dental college has been established in St. Louis we trust that the profession will require all who practice dentistry to be fully and thoroughly qualified. Our city can boast of having able and talented members of the profession, and good teachers. May their labors as such be appreciated by their professional brethren.

VITAL STATISTICS OF ST. LOUIS.

From February 1 to March 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records, by J. E Folsom, M. D., Clerk of the Board of Health.

DEATHS DURING THE ABOVE PERIOD.

White Males	151	Still Born	39
White Females	105	Under five years of age	113
Colored Males	16	Between five and twenty years	24
Colored Females	9	Between twenty and forty years.	64
Born in the United States	189	Between forty and sixty years	26
Born in Germany	44	Between sixty and eighty years	13
Born in Ireland	39	Bet. eighty and one hundred y'rs	2
Born in other countries	9	Total	281

DISEASES.

Accidents	2	Fever Puerperal	6
Abscess	2	Fever Remittant	5
Apoplexy	8	Fever Intermittent	2
Asphyxia	1	Fever Congestive	4
Bronchitis	7	Gastritis	2
Burns	4	Hepatitis	5
Carditis	4	Hydrocephalus	4
Cancer	4	Laryngitis	1
Cerebritis	5	Labour	4
Cholera Morbus	2	Marasmus	12
Cholera Infantum	1	Meningitis	2
Convulsions	14	Old Age	1
Congestion of Brain	4	Paralysis	2
Croup	4	Peritonitis	1
Diarrhœa	7	Pertussis	8
Diphtheria	1	Pathisis	34
Dropsy	8	Pneumonia	29
Dyspepsia	1	Rheumatism	2
Enteritis	6	Rubeola	2
Epilepsy	1	Scarlatina	2
Erysipelas	1	Scrofula	2
Emphysema	1	Tetanus	7
Fever Typhoid	19	Unknown	8
Fever Bilious	1	Wounds Lacerated	4

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THE SAINT LOUIS

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A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

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PTELEA TRIFOLIATA.

BY JUSTIN STEER, PH. D.

(Communicated for the St. Louis Medical Reporter.)

This tall shrub, belonging to the family of Rutaceae, is a very common plant in many parts of the United States, and generally abounds in rocky places. Its flowers have a peculiar, disagreeable odor, and its fruit is said to be sometimes used as a substitute for hops. The bark of the root has, of late years, acquired considerable reputation among physicians of the Western States, as a remedy for dyspepsia, and also as a general tonic.* The bark of the root was subjected to the following experiments, in order to ascertain whether its bitter and tonic properties were dependent upon Berberin; this alkaloid having been found in a number of plants belonging to this same family. In connection with obtaining the alkaloid, a few preliminary experiments were performed in order to ascertain some of the constituents of the bark of the root.

I. A small quantity of the bark of the root was thoroughly dried, pulverized and completely exhausted with alcohol. The

* See an article on Ptelea Trifoliata by O. F. Potter, M. D., in Vol. 1, No. 1, page 6, St. Louis Medical Reporter.

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resulting tincture was of a yellowish brown color. The alcohol was then distilled off, until the tincture was reduced to one-eighth of its original bulk. Upon standing for a week it deposited small globules, which were of an oily nature. It was then shaken up and thrown into a large quantity of water, when there was precipitated a resin of a yellow color, which afterwards changed to a deep brown. When placed upon paper this resin produced a greasy stain. It was readily soluble in alcohol and ether, but only partly so in Liq. Potassae and Liq. Sodae. Its taste was oily, acrid and bitter, and its odor reminded one of the bark from which it was prepared. This was evidently an Oleo-resin. The exhausted powder which remained in the percolator was then treated with a small quantity of Tinc. Iodinii, which immediately produced a deep blue color, indicating the presence of starch.

II. Another portion of the pulverized bark of the root was exhausted by percolation with cold distilled water, until it passed through colorless. The infusion thus obtained was heated to the boiling point, when there was formed on the surface of it a coagulum, which proved to be albumen. The albumen was then separated and the infusion, concentrated by evaporation, was then subjected to the test for tannin, by means of a solution of gelatine, which, however, produced no precipitate, showing the absence of tannin. Another infusion was then prepared as the above, and to it was added Liq. Plumbi Subacetatis, which produced a yellowish white precipitate. This precipitate was collected on a filter and thoroughly washed with distilled water and dried. It was then mixed with alcohol and decomposed by the addition of SO_3 which was added until it no longer produced a precipitate of sulphate of lead. The sulphate of lead was then removed by filtration, and the filtered liquid, which was of a bright yellow color, was allowed to stand for a length of time, when there was deposited a yellow crystalline substance, which was odorless, tasteless, insoluble in ether and water; but readily soluble in Liq. Potassae, with which it produced a brilliant yellow color, and

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alcohol. With concentrated sulphuric acid it produced a beautiful purple color. This was then the yellow coloring matter of the bark.

III. The bark of the root was reduced to ashes in a crucible. The ashes were then digested in distilled water acidulated with muriatic acid. The liquor thus obtained was filtered and tested with the following reagents:

Oxalate of ammonia, which produced a white precipitate, showing the presence of a salt of lime.

Bi-Chloride of platinum, a yellow crystalline precipitate, a salt of Potassa.

Ferrocyanide of potassium, a light blue color, a salt of iron.

IV. The bark of the root was treated for Berberin by the same process that is employed for obtaining this alkaloid from Berberis Vulgare. The bark of the root was pulverized and infused with boiling distilled water. The infusion was then evaporated to the consistency of a soft extract, which was exhausted with alcohol, and evaporated to a small bulk, and while yet warm, sulphuric acid was added, when upon cooling the sulphate of Berberin was obtained in small acicular crystals. The sulphate having been dissolved in water, was then decomposed by oxide of lead. The liquid was then filtered and allowed to crystallize. The crystals thus obtained were very small, yellow and acicular. They evidently were Berberin, as the following tests will show. They were soluble in water and also in alcohol, and insoluble in ether. They dissolved readily in sulphuric acid, producing an olive green color. With nitric acid they produced a blood red color. The sulphate of Berberin as prepared above, was precipitated from its solution by iodide and bromide of potassium, and also by bi-chloride of mercury. The taste of the sulphate and also of the isolated alkaloid was extremely bitter. Berberin, then, is the bitter and tonic principle of the bark of the root of Ptelea Trifoliata, upon which its virtue depends.

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A CASE OF PUERPERAL FEVER.

Read before the St. Louis Medical Society, by W. H. Cooper, M. D.
(Communicated for the St. Louis Medical Reporter.)

I desire to call the attention of the Society to the subject of Puerperal Fever. Within the past ten days I have treated two cases, and have been conversant with the history of a third that I did not treat.

These cases occurred under circumstances that justify anticipations of the prevalence of this most formidable disease in the form of an epidemic. As I do not intend to call the attention of the Society particularly to the three cases, I will say, that they were women in the prime of life, the mothers of several children each, never had any difficulty in child-bearing, nor was there the semblance of difficulty in their last confinement. Each sickened within twenty to thirty hours after delivery. All were delivered by the same midwife. Two died within ten days. The first indications of disease was a chill, followed by fever. On examination tympanites was present. In two of the cases there was tenderness, in neither was it remarkable, no drawing up of the knees to relieve the tension of the walls of the abdomen. Could be turned on either side with comfort, notwithstanding the tympanites equaled in size the period of seven months' gestation. The pulse was rapid, tongue red and clammy, great nervous disorder, delirium, vomiting and looseness of the bowels.

Two of these cases were treated by leeching, fomentation both warm and stimulating, blistering, calomel and opium, camphor, quinine and turpentine (when the stomach would not bear medication it was given by enema) brandy and beef tea.

Of the third and last case I wish to speak more particularly. On the evening of February 14th, I was requested by my friend, Dr. Guhman, to see this lady with him, the Doctor feeling great solicitude as to the result, knowing the rapid and unfortunate termination of the two preceding cases. We found her with a hot moist skin of a peculiar, livid, yellow hue, pulse 138, soft and imparting to the sense of touch, a peculiar thrill,

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countenance manifesting but little concern in what was transpiring around her, and her babe exciting none of the emotions of a mother; said she had no pain save a little uneasiness of the head; tongue coated, clammy and of a red color—the papillæ being very prominent. Her thirst was not excessive. The abdomen was tympanitic, as large as a woman of seven months' gestation, the umbilical region standing up giving the abdomen the appearance of a uniform distention of the peritoneum. There was no especial fullness of the breast, but some milk. The lochia amounted to but a stain. The uterus seemed to be in about the same state as to size as you would find it immediately after a normal delivery, and there was less sensibility. Upon a most thorough kneeding of the abdomen we could not obtain an acknowledgment of pain or tenderness.

Believing we had a case of uncomplicated Puerperal Fever to contend with, and having the results of the usual treatment in the cases before mentioned, we determined to adopt the following course. Allow me to remark that Dr. Guhman saw the case a short time previous, and ordered:

Rp.

Hydrg. Chlorid. Mitis, gr. iv.
Pulv. Opii, gr. ii.
Gum Camph, gr. vi.
Quinine Sulph, gr. xx.

To be made into twelve pills, one pill to be given every two hours.

The patient had taken two pills. Not recognizing the presence of an inflammation, but a fever, the result perhaps of a blood poison, we determined to address our remedies in that direction, and ordered:

Rp.

Sodæ Bisulphitis, ʒ. iii.
Aquæ Camph, ʒ. ii.
Syrup Aurant, ʒ. ii.

A tablespoonful to be given every two hours. Also,

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Rp.

Tinct. Veratrum Viride, gtt. xxii.

Syrup Simp, ʒ. i.

A teaspoonful to be given every two hours.

We called on the 15th, at 9 o'clock, A. M., found the patient with less fever; had not slept; some delirium, but when aroused or spoken to sharply answered questions rationally; pulse 115; tympanites was about the same as before; ordered:

Rp.

Hydr. Chlo. Mitis, gr. vii.

Pulv. Opii, gr. iii.

Quinine Sulph, gr. xx.

To be made into twelve pills, one pill to be given every four hours, and with turpentine stupes to abdomen.

We did not realize an absolute necessity for the mercury, but apprehending the supervention of intercurrent inflammation, either in the head, lungs or uterus and appendages, we thought it best to prepare the way for its rapid administration; continued the soda and veratrum. The patient disliked the taste of the soda; ordered syrup of ginger in addition. We saw the patient in the evening at 7 o'clock. The pulse was 105; had slept two hours, the first for three days; tympanites increased continued prescription and ordered:

Rp.

Misturæ Assafœtidae, ʒ. xii.

Tinct. Opii, ʒ. ii.

Ol. Terebin, ʒ. ss.

Three ounces were to be given by enema every three hours.

16th, 9 o'clock, A. M. Patient comfortable; pulse 100; tympanites less; slept well; has had beef tea through the night; continued the soda, pills and veratrum; increased the latter; continued enema. 7 o'clock, P. M., found the patient with less fever; pulse 95; tongue very red and clammy; inside of the lower lip covered by membranous exudation the size of a finger nail; peeled it off and cauterized the surface. Bowels inclined to run off; discontinued the mercury, but continued the soda,

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and with instruction to give the veratrum as circumstances warranted.

17th, 7 o'clock, P. M. We found her bowels were less active, with less fever, and more of a discharge from the vagina. The mania continued; pulse was down to 65. Her husband, a very intelligent man, says it had been down to 60. Discontinued the soda and veratrum, and ordered (to be given as necessary) Rp.

Creasotum gr. iii.
Quinine Sulph, gr. xv.
Acid Tannic, gr. xvi.
Pulv. Opii, gr. iiiss.

To be made into eight pills, one pill to be given every two hours.

19th, 9 o'clock, A. M. The patient better; pulse 80; stomach quiet, bowels less active; had slept well, and takes beef tea with a relish; has more discharge from the vagina. Her mouth sore from the frequent peeling off of the exudation on inside of the lip; has left a deep, ragged ulcer; ordered the parts touched with solution of nitrate of silver three times daily, and a solution of chlorate potassa as a wash. Internally. Rp.

Quinine sulph, ʒ. ss.
Acid Tannic, ϑ. i.
Cordial Calys, ʒ. ii.
Syrup Aurant. ʒ. ii.

A tablespoonful to be given every four hours, with dilute nitric acid in sweetened water every two hours. The veratrum to be continued or omitted as might be necessary.

At 7 o'clock, P. M., found the patient better generally; has not urinated since last night; used catheter and drew off large quantity of high colored urine, with strong ammoniacal odor; tympanites less; bowels quiet; continued prescription.

21st. The patient still improving; sleeps well; appetite good; pulse 75 to 80; has milk in the breast; no secretion from the

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vagina; great discharge of flatus from the bowels; the tongue cleaned and healthy.

24th. The patient is now taking turpentine emulsion, nitric acid in sweetened water, quinine, wine and beef tea, and in every respect rapidly convalescing.

The conclusion came to from the close observation of this case is, that the prostration that seems so prominent was perhaps not real. I consider the part played by the veratrum as not a secondary cure in the treatment, for it prevents stasis by reducing the heart's action. I believe it imparts tone to the heart and blood vessels as it decreases the frequency of their action; and by that means gives time for the administration of soda, quinine, the mineral acids, or other remedies that may be selected with a view to the elimination of the poison from the system.

A LECTURE ON PUERPERAL CONVULSIONS.

Delivered January, 1868, at the College of Physicians and Surgeons, N. Y., by T. Gaillard Thomas, M. D., Prof. of Obstetrics and Diseases of Women.

It would not be possible to give you a comprehensive view of the subject of to-day's lecture without making some prefatory remarks upon convulsions in the non-pregnant state. In doing this I will be as brief as is consistent with a faithful exposition of the present state of pathology, on a point about which even now much diversity of opinion exists, and then occupy your attention with those varieties met with in the puerperal condition

Definition.—The term convulsion may be defined as a violent, irregular, and involuntary contraction of muscles ordinarily under the control of the will.

Varieties.—From certain peculiarities they have been divided into two great classes—tonic and clonic. An attack characterized by lengthy and continuous muscular contraction is called a tonic convulsion, while one in which the spasm of the muscles is rapidly intermittent is styled clonic. An example of the first class is tetanus, and of the second epilepsy.

The first of these varieties does not concern our present investigations; so, leaving it out of consideration, we proceed at once to the second, which may be greatly simplified by a proper division and classification.

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All clonic spasms, when fully developed, whatever be their form, may be grouped under three heads:

1st. Simple convulsions.

2d. True epilepsy.

3d. Epileptiform convulsions.

The first includes those convulsive seizures which are general, but are unattended by loss of consciousness, as hysterical and choreic. The second defines its own meaning. The third comprises those which resemble true epilepsy in loss of consciousness, and many other particulars, and yet differ from it in others, which prevent their being treated of synonymously.

Taking epilepsy as a type, as it may well be considered, we have named the third class from its resemblance to this type. In truth, the real difference which at present exists between the second and third forms is, that the second occurs habitually, while the third does not; and that for the second we cannot assign a cause, while for the third we can.

This may appear to be a singular ground for distinction, and yet it is the true one. Who, for instance, would call the convulsions due to teething or crude ingesta epilepsy? And who would not do so, if similar seizures occurred habitually and without ascertainable cause?

By some authors a variety of convulsive attacks besides these three are cited, but I cannot agree in the propriety of their admission. For instance, "apoplectic convulsions" are spoken of. Now, any severe eclampsia may produce apoplexy, which results from the great cerebral congestion accompanying the seizure; or the effusion of a clot of blood upon, or in the substance of, the brain, may by centric irritation produce epileptiform convulsions. But why call these apoplectic convulsions? In one case apoplexy is the result of an epilectic or epileptiform spasm; in the other it produces eclampsia of those varieties, and no one has the right arbitrarily to characterize these by a special name, any more than he would have to call those due to teething dental convulsions, or those arising from crude ingesta gastric convulsions. If it be meant that a peculiar kind of convulsion is very apt to result in rupture of a cerebral blood-vessel, a dangerous error is by this nomenclature promulgated, for, given a fatty state of those vessels, and any, even the slightest, seizure may result in that accident.

All the general and clonic convulsions, then, which you will meet with in practice may be classed under one of these heads, let them occur in the child or the adult, the male or female sex, the pregnant or not-pregnant woman.

Having gone as far as this, you will be able to listen intelligently to the investigation of the question, to which of these three classes belong those seizures which occur in the pregnant

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or parturient woman, and which are known under the generic term of "puerperal convulsions."

I do not wish you to accept of my statement upon this subject, nor adopt my view with reference to it, without careful examination of, and reflection upon, the grounds upon which I offer them.

As in the non-pregnant, so in the pregnant state, three varieties of convulsions may occur—the hysterical, the epileptic, and the epileptiform; and by many, any one of these occurring in the latter state would be styled puerperal convulsions. This term, however, should as far as possible be confined to those, not simply occurring in, but dependent upon the state of puerperality. We would not call an attack of pleurisy occuring to a lying-in woman puerperal pleurisy, but if there were a variety of that disease due to, or very much influenced by, the puerperal state, such an appellation would be highly appropriate. So with convulsions. Hysterical convulsions are common in all excited states of the female system, and occurring in the puerperal state, should be regarded as hysteria. Epilepsy, so far from depending in any degree upon pregnancy, is very rare at that time; and even the patient who is liable to that disease in the non-pregnant state, may escape its seizures during the puerperal.

With epileptiform convulsions, however, this is not the case; they are often, in fact generally, due to this state, and seldom occur in the adult without its influence. Therefore the term puerperal convulsions should, I think, convey to the mind of the hearer the idea of eclamysic seizures of epileptiform character; not of hysteria, not of true epilepsy, nor yet of apoplexy; but of a seizure *dependent on and due to the state which gives it its distinctive name.*

This, then, is the restricted signification which I would have you always give to the term puerperal convulsion.

Causes of Epileptiform Convulsions.—The causes of epileptiform convulsions may be enumerated as—

(*a.*) Reflex or eccentric irritation, as from dentition, crude ingesta.

(*b.*) Centric irritation, as in cerebral disease, meningitis, pressure on the brain, etc.

(*c.*) Poisoning of the blood by bile, urine or some of its constituents, carbonic acid, alcohol, etc., etc.

(*d.*) Specific poisons, as lead, strychnia, the various narcotics, etc.

(*e.*) Disorder of the cerebral circulation, as from congestion, anæmia, etc.

Any one of these causes existing in sufficient degree in the non-pregnant state would produce epileptiform convulsions,

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and existing even in less degree they would likewise do so in the pregnant, when the nervous system is in a plus state of excitability, and the reflex influences more than ordinarily acute. At the same time that I admit that any of these causes *may* produce puerperal convulsions, I wish with the utmost distinctness to state my belief that, in the vast majority of cases, poisoning of the blood by some of the constituents of the urine is the great cause of the seizures. I admit the other causes mentioned, not upon the evidence of old writers, who, not being awakened to the frequency of this cause, did not seek for its existence, but upon that of modern observers, who have carefully tested the urine and blood before drawing their conclusions.

For that class of cases reported in such large numbers, however, as being due to some indiscretion of diet, or to pressure of the head against the os uteri or vagina (which of course exists in every case), without any interrogation of the renal secretion for disorder of the kidneys, I have not the slightest respect. However full of sound they may be, they signify nothing; or at most, all that we should admit with regard to them is, that the irritation charged with the whole evil is only an exciting cause; the great predisposing one having been undetected, probably because unsought for.

While house-physician in Bellevue Hospital, a young man of robust frame and great muscular development, with every appearance of having enjoyed excellent health, was brought into the wards under my charge in an insensible condition, and presenting the phenomenon of violent epileptiform convulsions. I say the phenomenon, for it is really one to see a perfectly healthy man suffering from true epileptiform convulsions. I could not account for the attack, and treated him upon general principles, among other remedial measures used an enema of oil and terpentine. This acting, about a gill of cherry-stones was discharged, with very little fæcal matter. The patient died, and, upon a post-mortem examination, nearly a pint of stones was found in the caput coli, the ascending colon, and the ileum. Now, as it is a perfectly fair and rational conclusion that these stones caused the convulsions which produced the death of this healthy and powerful man, it would be irrational to say that they would not have produced a like result in a hyperæsthetic and excitable pregnant woman. Nevertheless, as such results from such causes rarely occur in the non-pregnant, so do they in the pregnant state.

I have never met, in my own practice, with puerperal convulsions, where uræmia was not the undoubted cause.

You may then, I believe with safety, fix in your minds the following as an axiom: as a rule, puerperal convulsions are due

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to uræmia; as a rare exception to this rule, centric or eccentric irritations may be causes of them.

You will recognize in the fact which I have just stated relative to the connection between uræmia and puerperal convulsions, one of great importance, a knowledge of which has already saved many lives, and will in the course of time save many more. A half century ago, Hamilton and Damanet noted the fact, that anasarca was very apt to be precursory of puerperal convulsions; but to Drs. Lever, of London, and Simpson, of Edinburgh, belongs the glory of having solved the important problem which has since done such service to humanity. Their views were published simultaneously in 1843, and since that time abundant corroboration has been furnished by many of the first pathologists of our day.

Pathology of Uræmic Puerperal Convulsions.—It is probable that as the pregnant uterus rises in the abdominal cavity, it exerts a hurtful pressure upon the kidneys, preventing venous flow from them, produces congestion, and thus impairs their eliminative function.

From this, results a discharge of albumen in the urine, and an accumulation of some of the elements of the urine in the blood. What the poison is, the collection of which, in the blood, produces the peculiar nervous manifestations which follow, is not clearly ascertained, although numerous experiments which are being constantly instituted for the elucidation of the fact, are surely bringing us nearer and nearer to a just appreciation of it. By some, it is supposed that urea is the toxic agent, but this view is opposed by the weighty names of Bright, Johnson, Frerichs, Rees, and others.

It was Frerichs, I believe, who first promulgated the view that the urea accumulated in the blood undergoes a decomposition which results in the formation of carbonate of ammonia, which is the hurtful agent.

M. Trieste has advanced an extremely ingenious and plausible view, to the effect, that this decomposition does not occur in the circulating fluid, but that the carbonate of ammonia forms on the mucous membrane of the intestinal canal, and is subsequently absorbed. This receives corroboration from a statement by Bernard and Barreswill, that this substance is found in the intestines of animals the kidneys of which have been extirpated.

Etiology.—I mentioned just now that pressure of the enlarged uterus upon the kidneys was probably a cause of the disordered function of those organs. There is some other agency, however, which must be regarded as active, for tumors and fluid accumulations in the abdominal cavity, which exert the same or greater pressure, do not produce a like derangement. This

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influence is to be found, I think, in the peculiar state of the blood produced by pregnancy. A misconception was for a long time prevalent among physicians with reference to the state of the blood in pregnancy, many regarding it as being in a state of greater richness than that of the non-pregnant condition; in other words, it was supposed that the pregnant woman is plethoric. Now, if the term plethora is employed to signify a "fulness," or great amount of circulating fluid, this is true; but it is not so if it be used, as it often is, to indicate that the blood is rich in red corpuscles. Andral and Gavarret, Becquerel and Rodier, and other equally eminent men, have analysed the blood of numbers of pregnant women, and pronounced it to be, on the other hand, in a watery state, which receives the name of Hydræmia.

The following are the statements of Becquerel and Rodier: "Recherches sur la Composition du Sang, 1844." "These are the adulterations which it (*i. e.* the blood of pregnancy) undergoes:

Diminution of the density of the blood defibrinized, and of that of the serum.

Increase in the proportion of water.

Great diminution in amount of the globules.

Slight increase of the fibrin.

Diminution of the albumen of the serum, etc.

Dr. Rees believes that such a state of the blood is peculiarly conducive to the action of this toxæmia; and Dr. Todd, in his Lumleian Dectures on Delirium and Coma (*Med. Gaz*, 1850,) makes a similar statement. It is not unlikely that both of these causes are active in bringing about the results.

The occurrence of convulsions with first pregnancies is much more frequent than with subsequent ones; a fact which is probably due to the rigid and unyielding abdominal walls pressing the uterus more firmly against the kidneys than they would do in multiparous women, in whom they are lax and yielding.

Lachapelle had seven-eighths of her cases with first pregnancies.

Ramsbotham two-thirds of his cases with first pregnancies.

Merriman 28 out of 38 " " "

Collins 29 out of 30 " " "

Dr. Tyler Smith remarks: "It is a very old and true observation, that convulsion is often met with in single women whose minds have been depressed by the sense of shame and misery inseparable from their condition during gestation." I would suggest as an explanation of this "old and true observation," much more accordant with the enlightened pathology of the time, that unfortunates thus circumstanced are anxious to

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conceal their shame, and, by tight lacing, press the uterus with great force against the kidneys and disorder their eliminative action.

Premonitory Symptoms.—Of course it will always be very important for you to recognize the fact that your patient runs a risk of convulsions at as early a period as possible, in order to establish, as soon as your suspicions are excited, a course of preventive treatment. Let me strongly recommend to you, through your obstetric careers, to examine the urine of every pregnant woman who shows symptoms which cannot readily and satisfactorily be accounted for by the mere existence of the puerperal state, and do this more especially if œdema of the face or feet should be noticed. There are so many obscure symptoms which you will find due to puerperal uræmia, that I advise you not to wait for your suspicions to be aroused with reference to renal disease, before testing that secretion, *but always to do so as a matter of routine in the diagnosis of puerperal disorders.* Should you, after such an examination, in any period of pregnancy, find the urine albuminous, and more especially should the microscope reveal in such urine tube casts or renal epithelium, always be watchful for the occurrence of eclampsia of dangerous character, and put your patient upon preventive treatment.

Do not understand me that, whenever albumen and tube-casts are found in the urine of a pregnant woman, she will have convulsions; this is by no means true, for in the vast majority of cases they will not occur, and that, too, without special preventive treatment.

In twenty cases of puerperal albuminuria, Devilliers and Regnault had eleven cases of convulsions. Out of forty-one cases, Blot had only seven cases of convulsions; and Cazeaux gives the proportion as one-fourth or one-fifth.

The knowledge gained from an examination of the urine will generally be the only reliable information we can get at any period distant from the attack, but just before the attack occurs there are a number of premonitory signs which will excite our suspicions. Among these may be mentioned drowsiness, fretfulness, despondency, dizziness, violent headache, partial anæsthesia, amblyopia, muscæ volitantes, impaired vision, substernal or epigastric uneasiness or anxiety, with a sensation as if of sinking, tinnitus aurium, deafness, and stertorous breathing during sleep. Study the symptoms of uræmia in the male, and you will find them identical with these.

Symptoms of the Attack.—You will be at no loss for a diagnosis, even in your first case of this terrible malady, for there is nothing with which you could confound it, except with a similar seizure due to hysteria or epilepsy. In the beginning your

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attention will be attracted to the patient by the turning over of the eyeballs, so that only the whites remain visible; then the inferior maxilla will be drawn to one side, the lips puckered so as to cover completely the teeth, the head turned upon the neck, the occiput drawn towards the spine, and soon the flexor muscles of the arms act powerfully upon those members, flex the fingers, and bring the forearms upon the chest. All these contractions take place in rapid succession, and for a time the convulsion seems tonic in character; but soon the arms jerk violently, the head is moved rapidly upon the neck, the jaws open and close with great force, a deathly pallor or lividity overspreads the face, froth more or less deeply tinged with blood oozes from the violet lips, the woman begins to take full and stertorous inspirations, and the seizure passes off. After a short sleep the patient will awake, look confusedly at her alarmed attendants, and perhaps in a half-conscious manner ask what has occurred. This attack will, after an indefinite time, be followed by another, and after two or three have occurred, consciousness is generally abolished in the intervals, and stertorous breathing and a semi-comatose condition last from fit to fit. The number of convulsions which may occur before the case terminates, the frequency of their occurrence, and the severity which characterizes them, will of course depend entirely on circumstances governing each individual case.

Frequency.—Fortunately, this dangerous complication of parturition is not of frequent occurrence. In one thousand deliveries at the "Hospital of the Clinic," Velpeau met with not a single case; but this exemption was remarkable, the estimated proportion being about 1 in 485 deliveries.

Differential Diagnosis.—The differentiation of true puerperal convulsions from the epileptic and hysterical seizures which may occur in the puerperal state, is based upon the same principles which would govern the same distinction in the non-puerperal condition. That it is true epilepsy, will be known by the fact of the patient having been liable to attacks of that nature previously, and the conclusion thus based would be strengthened by discovery of a healthy state of the urine. Hysteria will be recognized by partial consciousness during the attacks, by their lengthy duration, by their slight intensity, and by the general hysterical behavior and character of the woman. There is a peculiarity in hysterical seizures which can be gathered by observation, but cannot be written, which will generally enable the physician to determine as to the true nature of the case, though sometimes the most skillful diagnostician is puzzled to decide.

Prognosis.—The prognosis of true puerperal convulsions is very grave for both mother and child.

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According to Braun, one-third of the mothers die; according to Churchill, one-fourth; and Romberg says one-half. In my experience, one-fourth have died.

It is a very significant fact, that those cases of uræmic convulsions accompanied by œdema are not as dangerous as those not thus accompanied. The reason appears to be, that the effused serum contains an appreciable amount of urea, which is thus got rid of by the blood. Of 4 cases without œdema, Blot lost 3; of 3 cases with œdema, he lost 0. In 2 cases without œdema, Regnault and Devilliers lost both; of 9 cases with œdema, they lost 5. Cazeaux gives the mortality of those cases with œdema 11 in 55; of those without it, 7 in 15.

Unfavorable as is the prognosis for the mother, for the child it is more so. It may be stated, that it is an exceptionable occurrence for a child born of a mother who has suffered from even a few violent convulsions to live.

Causes of Death.—The attacks may recur with varying rapidity and severity, until the exhausted patient is destroyed, or the very first convulsion (as in a case recorded by M. Depaul) may snap the thread of life. In addition to exhaustion from oft-repeated attacks, the life of the woman may be destroyed by apoplexy, the result of rupture of one of the cerebral blood-vessels; asphyxia, the result of spasm of the glottis and muscles of respiration; intra-cranial or pulmonary serous effusion, the result of transudation through the walls of the distended capillaries; coma, the result of cerebral congestion; or paralysis of the heart, the result of violent spasm of that organ.

I was for some time under the impression that death was attributed to the last of these causes, upon grounds which were purely theoretical; but witnessing a case in which I believe that death thus occurred, has caused me to change my mind. The case was this: a young Irish woman, to whom I was called by the late Dr. Murphy, of this city, was suffering from repeated attacks of the most violent convulsions. I was standing by her side, with my fingers on the pulse, which was beating with a fair amount of force, when a seizure took place. It passed off, and the heart, beating once or twice very feebly, ceased entirely to act in less than ten seconds. We had here no evidence of injury done to the brain; the woman did not die of asphyxia or exhaustion, and I know of no way in which to account for the sudden death than by supposing that the heart, overcome by violent spasm, refused to perform its function. Even if great cerebral lesion had occurred, death from it would not have been so instantaneous. Persons affected by apoplexy never die *instantaneously;* those who die of cardiac disease often do. In the case just detailed I performed the Cæsarean section, but the child was dead.

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If the patient seems to be improving, and the convulsions have ceased, a prognosis with reference to the probabilities of their return will depend, I think, more upon the amount of albumen found in the urine than upon anything else. Should this substance diminish rapidly, a very favorable prognosis may be made; but never should the patient be regarded as out of danger until it entirely disappears.

As regards the prognosis to be made with reference to the probabilities of a return of the kidneys to a healthy state after delivery has taken place and the convulsions ceased, I should say that it should be generally decidedly favorable.

Causes of Infantile Mortality.—The causes for the great infantile mortality observed in such cases are these: The placenta, compressed by abdominal spasm, and supplied by poisoned blood, ceases to exert a proper influence on the blood of the fœtus; or the child, suffering from uræmia like its parent, may die of intrauterine convulsions. Even if born alive, its chances for life are not good, for many infants thus circumstanced die within the first twenty-four hours of their existence.

Preventive Treatment.—Having been lead to believe that there is a probability of the occurrence of puerperal convulsions in any case, these are the best means for avoiding the disastrous issue. Let the diet be light and nutritious, and let it consist of very little animal food; see that the bowels are kept very regular by means of saline cathartics; direct the patient to take regular exercise in the open air, avoid late hours, heated rooms, exciting company, and stimulating drinks; and keep the skin as active as possible by occasional warm baths, friction and appropriate clothing. But above all, let the patient be delivered under the influence of chloroform, unless some very powerful objection should exist to its use.

By these means you will often be able to prevent the occurrence of threatened convulsions, if you are forewarned of the threat a sufficient time before the development; and in some cases you may prevent the issue, even if you are made aware of its approach just before the attack occurs. Let me give you an example of what I consider a case in which convulsions were prevented. Mrs. S., a lady who had borne two children, had passed through her third pregnancy without much trouble, and sent for me one afternoon in December, 1860, on account of commencing labor. The os was just beginning to dilate, and supposing that the labor would come on during the night, I retired to an adjoining chamber, requesting the nurse to call me when the parturient process should have progressed so far as to make my presence necessary. About five the next morning, Mrs. S. sent for me on account of a very violent headache, which had caused her to cry out, so great was its severity, and

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when I saw her she was rocking herself to and fro, and complaining bitterly. The nurse drew my attention to the fact that her face had become much puffed, and told me that during the night she had complained of ringing in the ears, flashing before the eyes, and great nervous trepidation. At that moment she complained of great dizziness, and stated that the figures of the carpet seemed to be rapidly revolving. She was not an hysterical, or even a very nervous woman.

The pulse was full, almost bounding, and somewhat accelerated.

Obtaining some of her urine, I examined it with heat and nitric acid, and found that it was loaded with albumen.

I now administered a very active saline cathartic, caused the patient to keep her bed, and got some chloroform ready for use. I did not employ it, however, because her husband was very violently opposed to it. The labor progressed steadily, when just about the end of the first stage, a slight twitching was observed in the muscles of the face, and very slight turning of the balls of the eyes. She was now instantly put under the influence of chloroform, and kept so to the end of the labor, which was happily concluded for both mother and child. It may be said, with reference to my conclusions in this case, that they are illogical, from the fact that, even without the use of chloroform, she might have escaped what I deemed so imminent. This I allow, but I submit that few cases with so much albumen in the urine, and fewer still with so well-pronounced rational signs, escape the climax. I have always felt a conviction that without the preventive means adopted, that lady would have passed through a fearful ordeal, which was by them avoided; and this is not an isolated case in my experience, but is mentioned merely as a fair type of a class.

I cannot leave the subject of preventive means without offering for your consideration the question of the propriety of the induction of abortion or premature labor in those cases where the uræmic poisoning is very great, and is evidently increasing as pregnancy progresses. It appears to me to be always well worthy of consideration. I have had several cases in which I think that the maternal and fœtal life have both been saved, by induction of labor at the beginning of the eighth month, which would have been jeopardized at the end of the ninth.

Treatment of the Attack.—As the treatment of the attack will primarily consist in closing the avenues by which death may approach, let us see what these are. They may be thus recapitulated:

a, Apoplexy.
b, Asphyxia.
c, Serous effusion.

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d, Coma.
e, Exhaustion.
f, Paralysis of the heart.

In view of these, the indications of treatment may be enumerated as follows:

1st. Check the convulsive action at once, and thus prevent death by asphyxia, or the cerebral conditions resulting from congestion and failure of the heart to perform its function.

2d. Diminish vascular turgescence and excessive action, and thus remove the great liability to apoplexy and coma.

3d. Evacuate the uterus, if possible, because experience has proved that in the majority of cases the seizures will then cease, and because we thus remove pressure from the kidneys.

4th. Eliminate or neutralize the poison accumulated in the blood.

To accomplish the first of these indications, no means is at all comparable with the anæsthetic influence of chloroform. Blood-letting is far inferior to it in its results, much more unreliable, and accompanied by much greater dangers. No greater boon could be conferred upon the obstetrician than the power of controlling these terrible convulsive seizures, and I do not believe that I exaggerate when I say that in many, nay, most cases, such a power exists in chloroform. Ether, from the stage of excitement which it produces, is not so applicable to these cases, and in some instances I have found its use entirely inadmissible, while chloroform has accomplished immediately all that I desired. If serious injury, such as effusion of serum or blood, has taken place in the brain, anæsthesia will probably accomplish nothing; but if it be resorted to early and fearlessly, its results will surprise you.

So anxious am I, gentlemen, to fix what I believe to be a proper impression upon your minds concerning this important point of our subject, and at the same time not to say more than my experience warrants me in asserting, that I will beg your attention to the account of three cases which illustrate the matter more fully than any other means would do.

I was called to a primipara whom I had delivered six weeks before, and who had, subsequently to delivery, suffered from a slight attack of puerperal mania, and found her suffering from a most intense headache, dizziness, and confusion of mind. Her pulse was so full, and her general appearance aroused my suspicions of approaching convulsions to such a degree as to lead me at once to test the urine, which I found to be loaded with albumen. I immediately went for chloroform, and returned, found her in a fearful convulsion, which, in spite of the efforts of her attendant, had thrown her from her bed to the floor. As soon as it passed off, I put her fully under the influ-

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ence of chloroform, which quieted her, and she slept placidly for about two hours. Her family appeared very apprehensive about so free a use of the anæsthetic, I then agreed to discontinue it, to learn whether the seizures would return. No sooner was she fully awake than another, if possible more violent than the first, came on. This I tried three or four times with the same result, and the patient was kept more or less under the influence of the anæsthetic for about forty-eight hours. During this time she would sleep quietly for one or two hours at a time, without the inhalation of the drug, and her strength was sustained by nutritive enemata. She recovered, and the albumen gradually disappeared from the urine.

The two other cases I saw with the late Dr. John W. Francis, and so closely do they resemble each other that they may be related together. Both were primiparæ; in both the lancet was freely used, without checking the convulsion, which really seemed to me to increase under the sanguineous loss, and in both chloroform acted most perfectly. Dr. Francis was at first much opposed to its use, but seeing that all other means had failed, and knowing that death would surely be the result if the oft-repeated and very violent attacks were not checked, he consented to its use, and in neither case did he hesitate to admit that the successful issue was due to its influence. One of these ladies was kept under it for about eight hours; the other about sixteen hours. In the latter the cessation of the anæsthetic effect on two or three occasions resulted in return of the eclampsic seizures, as it did in the first case related.

To obtain the full results of anæsthesia under these circumstances, the influence must be kept up steadily and unintermittingly for twenty-four, forty-eight, or a greater number of hours, if necessary.

I do not mean that the patient must be all that time under its full influence, but that she should be sufficiently under it to effect the object in view, if it can be effected by this remedial means. But one person cannot do this, and I think that, in these cases, a capable assistant should always be associated in the case, whose entire time can be given up to it.

Should it be absolutely necessary, an intelligent non-professional assistant may be intrusted with the administration of the chloroform; but this is attended by risk, and should never be done until that individual is properly instructed by the physician, and made to gain some experience in his presence. You may say that there must be a good deal of risk in this. I answer, there is less than in leaving the patient without the anæsthetic influence, and it is only in the face of this alternative that it should be done.

If anæsthesia controls the convulsions, blood-letting should

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not be resorted to. Should it fail to do so, it should then be taken into consideration, and decided upon by the same reasons which would govern such a decision concerning it in pneumonia or any other diseased condition. In other words, you should not bleed because the patient has puerperal convulsions, but because some special indication, as plethora, or too violent vascular action, for example, should point to its necessity.

Remember that, although the pregnant woman be hydræmic, she may at the same time, in one sense of the word, be plethoric; that is, there may exist an excess of blood in the system. This is called "serous plethora," and may be temporarily much relieved by the lancet, although the secondary effect of the loss is to increase the state of hydræmia. Venesection may be performed, for two reasons, in abnormal states of the circulatory system: first, to alter the state of the blood; and second, to diminish the mass which is passing through the blood-vessels, which are perhaps distended by its great amount. In puerperal convulsions it effects good results (when it does so at all,) by accomplishing the second end at the expense of the blood's chemical state.

It is not against blood-letting that I wish to guard you, but against its indiscriminate and invariable employment; and this I do because I feel convinced that I have seen much injury done by the lancet under these circumstances. Still, I do not hesitate to employ it in those cases where I find it necessary to accomplish the second of our enumerated indications, namely, the diminution of vascular turgescence and action.

We now approach the third indication, the evacuation of the contents of the uterus. If any general rule of action could be given with reference to this point, it should, I think, be to this effect: if the os has begun to dilate, encourage and hasten the labor so soon as the convulsions are at all controlled; should the woman not be at term, endeavor to manage the case without the induction of labor, leaving it as a dernier resort, but practicing it when other means fail to check the returning seizures. I have seen a case in which chloroform entirely quieted violent convulsions coming on at the eighth month, and the lady went to term, and was delivered without a return, but subsequently died from other effects of uræmia. Her child died at the time of the convulsions, and was putrid at the time of birth. If you deem it advisable to bring on or hasten the labor, pass a sponge-tent into the os uteri; use the warm douche freely against this and the encircling fibres of the os, and employ Barne's dilators. Should the os be dilated, stimulate the fibres of the uterus, by placing a gum-elastic catheter between the membranes and the uterine body, or deliver by version or the forceps.

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Sometimes the bag of waters may be ruptured with advantage.

When the head of the child gets within reach of the forceps, my impression is, that it is generally safer to deliver it, for every moment's delay adds to its danger. This should of course be done only when the fœtal heart is heard distinctly to be acting, for the operation is here performed for the child's benefit alone.

The means adapted to the accomplishment of the fourth indication are these. The kidneys being crippled in their functions, press other emunctories into service, and make them supplementary to these organs. I told you that Bernard and Barreswill had found the mucous membrane of the alimentary tract to be covered with carbonate of ammonia, and that Trieste supposes that from this part of the economy it is absorbed into the system. However this may be, it is advisable to act freely on that surface by active cathartics. If the patient can take them, I give by preference the salines; but if she cannot swallow, croton oil may be employed. The skin is often largely supplementary to the kidneys, and this should be made to act by the hot air or vapor bath. In addition, dilute citric or benzoic acid should be freely given, with the hope of forming in the blood citrate or benzoate of ammonia. The former may be given in the form of lemonade.

Sometimes, in the convulsions occurring after delivery, opium in full dose is found highly useful, but its use requires great caution. I have in a number of cases obtained the best results from producing profound anæsthesia by chloroform, and then by the hyponermic syringe injecting under the skin a solution of morphia.

You may be struck by the fact that I recommend, in enumerating remedial measures, only very prominent and important ones, and leave many others which are ordinarily advised, as, for instance, asafœtida, valerian, camphor, the use of sinapisms, cold effusion, etc., etc., unmentioned. My reason for this is the belief that, ordinarily, perfect quiet, silence, and absence of light, are more important adjuvants than they, and that the physician should studiously avoid disturbing his patient by doubtful means. Some years ago, to demonstrate the importance of such quietude, I immersed a number of half grown frogs in a jar of water which contained strychnia. They were, after a little while, seized with violent convulsions, and removing them, I placed them, in the presence of the class, under a bell-jar. As long as all was quiet, the little animals were free from spasms, and seemed instinctively to be keeping very still; but no sooner did I tap upon the glass or remove it and blow very gently upon them, than they would be violently and repeated

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ly convulsed. I once heard Dr. Marshall Hall say, that having poisoned a young terrier with this drug, he could smoothe his hair down without causing spasms, but every time that he passed his hand in a contrary direction and rubbed the hair upwards, convulsions would take place. This he addressed to a house-physician at one of the hospitals in this city, who was at the time applying mustard and friction to a patient who was suffering from uræmic convulsions. Bear it in mind when you are prompted to harass and annoy your patients with the hope of removing the tendency to coma by revulsive means. There are, however, circumstances in which these means may be indicated. In concluding, let me, with the hope of leaving a complete picture on your minds, place before you a synopsis of the treatment of puerperal convulsions:

1st. Bring the patient fully under the influence of chloroform.

2d. *If the indications demand it,* practice venesection.

3d. If labor has commenced, hasten it. If it has not, endeavor to avoid the necessity of inducing it; but if you cannot, do not hesitate too long about its accomplishment.

4th. Act freely on the bowels and skin, apply cold to the head, and give lemonade freely, if the patient can swallow.

5th. Bear in mind that the prolonged use of chloroform is not near so likely to kill as a return of the convulsions is.—*Medical Record.*

On Catching Cold.—Catching cold is a common phrasefor an attack of catarrh, but it is a very incorrect one. One year I suffered so severely from a series of "colds" that my attention was drawnspecially tothem. I was then a lecturer on medicine, and nearly every night from five o'clock to six during the winter months had to turn out from a warm room to go through all weathers, lecture for an hour in a theatreheated bya stove, and lighted by gas, and then return again to my snuggery at home. When I felt a fresh cold begginning, I tried in vain to account for it, until I accidentally saw in Copeland's dictionary that the most fertile cause of a cold was coming from a moist, cold air to a hot and dry room. This at once explained to me the reason of my frequent suffering, for I had invariably gone into my hot room straight from the cold. I, of course, soon changed my habit; I lingered in the hall while taking off my great coat, perambulated the rooms which had no fire in them, went up and down stairs, and the like, ere I went into my study, whose temperature was also reduced. Since then I agree with a friend who says "that a cold comes from catching hot;" and I am disposed to think that there is a strong analogy between a chillblain on a child's toes and a cold in a person's nose, throat and lungs.—Dr. Thomas Inman.

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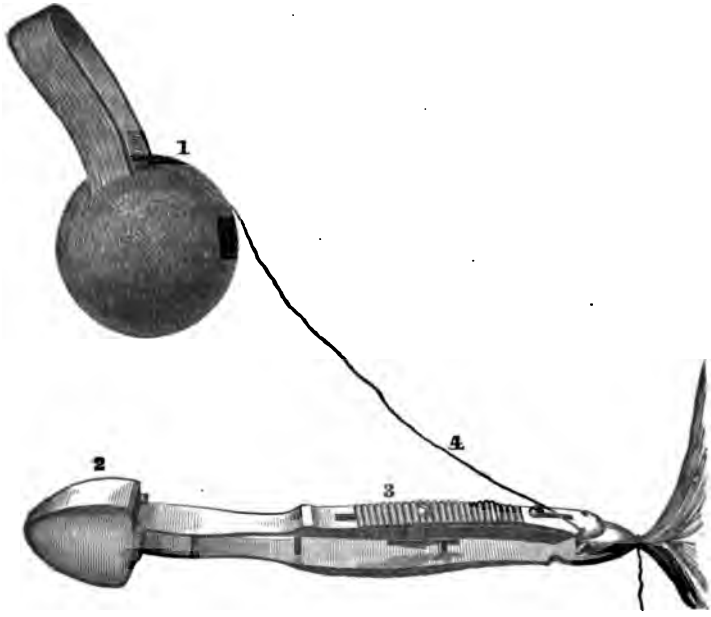
THE MEDICAL REPORTER.

ST. LOUIS, MAY 1, 1867.

SURGEON'S REEL AND ARTERY FORCEPS.

By Prof. JOHN T. HODGEN, of the St. Louis Medical College.

We have been furnished the following description of Prof. Hodgen's admirable invention, "The Surgeon's Reel," by Dr. W. B. Outten. As an ingenious and useful contrivance it is unequaled, and in long and difficult operations will be of great advantage as well as aid in the rapidity of operating.



No. 1 represents the reel, which is an ordinary hollow rubber ball, the diameter of which is about one and one-fourth inch; there is a cut extending through about one-half of its extent, for the purpose of introducing within the cavity a ball or spool of Surgeon's silk; on each side of this cut two smaller

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cuts are made, so as to pass through and fasten an elastic band large enough to slip over the hand and fit on the wrist. After the silk is placed (being previously waxed) within the reel, the end is allowed to hang out an inch or so in order that it may be in readiness. In using it the reel is attached to the left wrist (by means of the elastic band), the end of the thread hanging out as stated above, the ligature may be drawn out the required length and applied with much celerity and but little trouble.

The Forceps are the ordinary duck billed; on the end of the handle is a large knob (No. 2,) weighing about an ounce, the object of which (knob) is that by its weight it stretches and draws the artery from the soft parts, thus easily enabling a ligature to embrace the vessel. In the upper blade of the forceps there is an oblique notch (on both sides) three-fourths of an inch from the point, and one-fourth of an inch deep, passing obliquely upwards in the direction of the point, beveled so as to present a cutting edge forward. The thumb slide (No. 3,) is prolonged forward, having notches corresponding to that of the blade, with the exception that its cutting edge is presented backward in the direction of the handle; when the slide (3) is pushed forward so as to close the instrument these notches are brought opposite each other. In front of these notches on the upper blade there are little hooks directed obliquely backwards, which enable the ligature to be readily thrown into the notch; upon drawing back the slide (3) the forceps are opened, and at the same time the thread which is intended to be cut, being between the two sharp edges, is severed; thus there is combined forceps and scissors in the same instrument.

Potent Disinfectant.—The *Dublin Med. Press* states that Dr. DeWar, of Kircaldy, has discovered that "for the disinfection of inanimate material, the addition of a little nitre to sulphur, and the combination of these fumes with the steam of boiling water, improvises a disinfectant at once the most powerful, most searching, and most efficacious which can be obtained, utterly destructive at once of any latent contagion, and of every form of insect life."

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Clitoridectomy.—The profession has been called upon of late to seriously consider the propriety and value of this operation for the cure of epilepsy. The grounds of cure appear to ibe principally based on the supposition that epilepsy is caused n the most part by masturbation, a supposition, however, not by any means proven to our mind. The operation of amputation of the clitoris has been practiced by Mr. J. Baker Brown, of London, for several years, and has been principally defended by him, he having established a hospital for the special treatment of patients on which the operation should be performed, and has been operating, as he says, successfully for several years. We cannot, however, fully accede to his opinions, and would, without hesitation, pronounce the operation in most if not all cases cruel, unnecessary, and unnatural, and not at last removing the real exciting cause, for as expressed in an *Exchange:*

"It would really seem, if the operation be intended to diminish the sexual appetite which prompts to the vicious practice supposed to be the cause of epilepsy, that such physiological reasoning is of the most superficial character. The clitoris can no more be regarded as the cause of sexual desire than the correlated organ in man. The ovaries are the excitant in the one case as much as the testes are in the other. It would not be strange that the powerful impression produced by such an operation upon the nervous system should weaken for a time the epilectic habit, whether caused or not by the practice to which Mr. Brown attributes it And if so caused, the necessary suspension of the practice for a time, caused by the operation, would do much towards its permanent abandonment. In either case, it appears to us that other physical means might be tried, less harsh in their character, and as likely to be effectual; to say nothing of moral means which we cannot think would often fail of success, if, as we are told, it is not uncommon for the unfortunate class of whom we are speaking to have fallen into this habit without a proper appreciation of the moral or physical consequences it entails."

Mr. Brown Sequard, in a lecture published in the *Lancet*, also expresses his opinion on the subject as follows:

"An able surgeon has lately treated several kinds of functional nervous affections by extirpation of the clitoris. That this operation may sometimes be useful, there is no doubt at all. But I cannot look upon this mode of treatment as one

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that should be employed in other cases than those in which a distinct aura starts from the clitoris, or in those cases in which that organ is morbidly sensitive and much hypertrophied. There are cases of nervous complaints, due to masturbation, in which the clitoris has been extirpated without any durable benefit as regards the nervous affection, or even as regards the masturbation. In women, as well as in men, the only decisive means against masturbation is the production of a small ulcer (by caustics or the red iron) on parts of the genital organs that are unavoidably touched or moved in the act of self-abuse, so that every attempt to accomplish the act, either with or without the help of the hand, is so painful that the patient must give it up."

Dr. Charles West, of London, also expresses his dissent from Mr. Brown's opinion, and in a recent article in the *Lancet* defines his views in the following series of propositions:

"1st. Having for the past twenty-five years seen more of the diseases of children and young persons of both sexes than most members of my profession, and as much as most of the diseases of women at all ages, I believe that masturbation is much rarer in girls and women than in our own sex.

"2d. I believe the injurious *physical* effects of habitual masturbation to be the same as those of excessive sexual indulgence, and no other. The special *physical* harm done by masturbation I believe to be due to the fact that it can be indulged in at a much earlier age than sexual intercourse, and can be practiced with much greater frequency.

"3d. But, nevertheless, I have not in the whole of my practice seen convulsions, epilepsy, or idiocy *induced* by masturbation in any child of either sex; a statement, I scarcely need add, widely different from the denial that epileptics or idiots may, and not seldom do, masturbate. Neither have I seen any instance in which hysteria, epilepsy, or insanity in women after puberty was *due* to masturbation as its efficient cause.

"4th. I *know*, and I can appeal with confidence to the knowledge of many members of the medical profession, that of the alleged cures of hysteria, epilepsy, insanity, and other nervous diseases of women by excision of the clitoris, a very large number were not permanent. I further *know* that in several instances, one of which, seen by me in consultation with Mr. Paget, is related at p. 663 of my lectures, very mischievous results have followed it.

"5th. Although the moral questions involved in the practice

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of masturbation are not strictly within the province of medicine, yet, as the quotation from my lectures, taken apart from the context, may appear to imply that I believe the mind could be restored to its purity by any means which our art might furnish, I must add that I hold no such opinion.

"We too often see the man in whom the desire has outlived the power of performance for the dream to be possible that there is any necessary connection between infirmity of body and purity of mind; and most of your readers do not need to be reminded that the judgment of the Church as well as the sympathy of all are with the struggle and self-conquest of St. Jerome rather than with the voluntary mutilation of Origen.

"6th. Whilst I believe the removal of the clitoris in cases of hysteria, epilepsy, insanity, and other nervous diseases of women to be a proceeding theoretically based on erroneous physiology, and practically followed by no such results as to warrant its frequent performance, I regard it as completely unjustifiable when done for the alleged relief of dysuria or painful defecation, for the cure of amenorrhœa, or for the mitigation of the symptoms of uterine misplacement or disease.

"7th. I consider that public attempts to excite the attention of non-medical persons, and especially of women, to the subject of self-abuse in the female sex, are likely to injure society, and to bring discredit on the medical profession. I think that such attempts are the more objectionable when associated with a reference to some peculiar mode of treatment and alleged cure practiced by one individual.

"8th. I believe that few members of the medical profession will dissent from the opinion that the removal of the clitoris without the cognizance of the patient and her friends, without full explanation of the nature of the proceeding, and without the concurrence of some other practitioner selected by the patient or her friends, is in the highest degree improper, and calls for the strongest reprobation."

We are pleased to state, however, that Mr. Brown has lately determined to discontinue performing the operation for the present, at least pending the professional inquiry as to whether clitoridectomy is to be considered a valid and justifiable operation or not. We trust the subject will receive due investigation, and not be hastily or rashly adopted as a standard operation, for mutilation of natural organs are rarely called for, and should never be resorted to except in extreme cases.

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Code of Medical Ethics, adopted by the American Medical Association. Revised to date. William Wood & Co., New York, 1867.

We are glad to see the Code issued in a distinct form, that can easily be preserved, and printed so legibly that he who runs can read. Before there might have been a shadow of an excuse, if it were infringed upon, because to a great extent it was inaccessible, buried in ponderous tomes; now every professional man, if he be in doubt about such matters, or do not know, can use it as his pocket-book, if not oftener.

We advise every practitioner to have for ready reference this very neat copy of the Code; indeed, we think it would be a very good plan for the Faculty of every College to distribute it among their graduates at the commencement; a more suitable parting gift could not well be selected; the expense is trifling compared with the true value of the work. If we were attached to any college we should be willing, individually, to inaugurate the proceeding.

Delegates from St. Louis to the American Medical Association at its Annual Meeting, Tuesday, May 7th, 1867, at Cincinnati.—From the St. Louis Medical Society—Drs. A. Hammer, W. A. Gibson, M. A. Pallen, F. W. White, A. J. Steele, C. W. Andrews, R. M. Jordan, and J. Z. Hall.

From the Missouri Medical College—Prof. J. N. McDowell and Prof. B. F. Shumard.

From the St. Louis Medical College—Prof. M. L. Linton, Prof. J. B. Johnson and Prof. C. A. Pope.

From the Humboldt Medical College—Prof. A. Hammer and Dr. A. J. Steele.

From the Young Men's Medical Association of St. Louis.—Drs. J. J. McDowell, W. B. Outten and R. S. Anderson.

From the Pathological Society—Drs. J. .Z Hall and A. Hammer.

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We have never had before so large a delegation from St. Louis. For one reason now, that we are so near to the place of meeting, and for the higher and important reason, that the medical mind here as elsewhere has become warmed to the subject of medical education. The colleges are well represented, and we know their delegates are incited by the noblest motives in dealing with a subject, which has at last forced itself for improvement on the notice of the present generation. We cannot now go back to the old system of teaching of a dozen years ago; not to advance with the present movement is to be left utterly behind and lost irrevocably. A thorough teaching of medicine in the time, whatever length it may take, and a concentrated action of the colleges, are the outlines of the present regime. We trust our delegates will give their energies to this new measure, and bring us back the good results of their deliberations.

The Young Men's Medical Association of St. Louis.—This Society has been lately organized in our city by quite a large number of the younger members of the profession, for the objects of mutual improvement, as well as successful labor in the science of medicine. It deserves and will receive encouragement; and while it is for the most part confined to the junior aspirants for fame, we doubt not but it will most cordially welcome to its sessions those upon whom we have been accustomed to look with respect and reverence. The following gentlemen have been elected officers for the ensuing year:

Drs. J. J. McDowell, President; R. A. Quarles, Vice-President; Wm. H. Wood, Recording Secretary; R. S. Anderson, Corresponding Secretary; W. B. Outten, Treasurer.

The Society meets every Tuesday evening, at 8 o'clock, at the office of Dr. W. Niehaus, Olive street, between Fourth and Fifth streets.

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Burns or Scalds.—The following is one of the best applications we know of in cases of burns, or scalds, more especially where a large surface is denuded of the cuticle:

Take one drachm of finely powdered alum and mix thoroughly with the white of two eggs and one teacup of fresh lard; spread on a cloth and apply to the parts burnt.

It gives almost instant relief from pain, and by excluding the air prevents excessive inflammatory action. The application should be changed at least once a day.

The European Medical News.—We have received, through the courtesy of Dr. Robert Stone, New Haven, Conn., a prospectus for a new medical journal, "The European Medical News," to be devoted entirely to the reproduction in this country of all valuable foreign medical information. The object is excellent, and has been thus far approved and aided by some of the best men of the country. It does not require much to make it successful, and we hope that the profession will not be slow in coming forward to its support. The subscription price will be $5 00 per annum, in advance.

Miscellaneous.—The number of Deaf Mutes in France, according to a recent census, is 12,912.——Rush Medical College closed its twenty-fourth session with a graduating class of 72. ——Prof. M. Gunn, M. D., of the University of Michigan, has been appointed to the Chair of Surgery vacated by the death of Prof. Brainard.——New Orleans has established a morgue similar to those in Paris and New York.——At the University of Gottingen there are 189 students of medicine.——Dr. James C. White has retired from the editorship of the Boston Medical and Surgical Journal, having accepted an adjunct professorship

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of Medical Chemistry in the Harvard Medical School.——Prof. Agassiz lectured at the Cooper Institute on the 19th ult., on the Aquatic Animals of the Amazon.——Dr. William Brinton, the distinguished London physician, died on the 17th of January, aged 43 years.——Paris alone sends 18,000 children to nurse in the country.

VITAL STATISTICS OF ST. LOUIS.

From March 1, to April 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records, by J. E. Folsom, M. D., Clerk of the Board of Health.

DEATHS DURING THE ABOVE PERIOD.

White Males	198	Still Born	27
White Females	127	Under five years of age	148
Colored Males	14	Between five and twenty years	33
Colored Females	11	Between twenty and forty years.	89
Born in the United States	226	Between forty and sixty years	32
Born in Germany	62	Between sixty and eighty years	16
Born in Ireland	41	Bet. eighty and one hundred y'rs	5
Born in other countries	21	Total	350

DISEASES.

Accidents	8	Fever Puerperal	6
Abscess	8	Fever Remittent	4
Apoplexy	5	Fever Intermittent	6
Asphyxia	2	Fever Congestive	2
Albuminuria	4	Gangrene	2
Asthma	7	Gastritis	4
Bronchitis	12	Hepatitis	3
Burns	2	Hydrocephalus	3
Carditis	3	Hydrothorax	2
Cancer	1	Laryngitis	4
Cerebritis	4	Marasmus	19
Convulsions	21	Meningitis	5
Congestion of Brain	6	Old Age	2
Croup	2	Paralysis	3
Diarrhœa	10	Peritonitis	3
Diphtheria	7	Pertussis	4
Dropsy	5	Poisoning	2
Dyspepsia	1	Phthisis	42
Drowned	3	Pneumonia	52
Delirium Tremens	2	Rheumatism	2
Enteritis	10	Rubeola	7
Erysipelas	3	Retention of urine	1
Encephalitis	2	Scarlatina	2
Fever Typhoid	15	Scrofula	1
Fever Bilious	2	Unknown	2

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, MAY 15, 1867. No. 6.

AN INTERESTING CASE OF OBSTRUCTION OF THE BOWELS.

Read before the St. Louis Medical Society by I. G. W. STEEDMAN, M. D.

[Communicated for the St. Louis Medical Reporter.]

J. H——, a merchant in affluent circumstances, aged sixty-three years, was attacked with a severe colic at 6 A. M., on Friday, January 4th, 1867, locating the pain over the stomach and transverse colon. Dr. J. Magoffin was called in early and made two unsuccessful efforts to administer castor oil, but failed in consequence of excessive and persistent nausea. He then gave him a full dose of morphia. At 12 M., on the same day, I saw him, and, being a member of the family, I remained with the case until its close, Dr. Magoffin also continuing his visits during the whole case. During the afternoon fruitless efforts were made to evacuate the bowels by enemata. Friday night, the colic and nausea persisting, we gave him ten grains of calomel, repeated on Saturday morning, followed by salt water enema; all failed to evacuate the bowels. By this time there was great exhaustion. In the right iliac region, extending up under the ribs, a distinct tumor could be felt—it was very tender to the touch—pressure upon it producing great nausea and faintness. Early in the morning the pain was

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greatest, and tumor most distinct, over the caecum. During the day the pain and tumor apparently subsided at this spot, and was more distinct higher up and nearer the edge of the liver.

For three days this distressing state of things continued. All mild efforts at catharsis having failed, we did not resort to drastic cathartics, fearing intussusception. The stomach refusing to retain food or medicine, he was sustained by nutrient enemata of beef tea, etc. Though the patient had been in feeble health for some months, serious constipation was not suspected, as the bowels had moved regularly up to the day of this attack. In a slight attack of colic, accompanied by an intermittent fever, a month previous to this attack, I had given him ten grains of calomel, which acted mildly, but very efficiently, in emptying the bowels. He has suffered much in life from dyspepsia, but not seriously in some years.

Monday night, 7th, a scruple of calomel was given by the stomach, and four ounces of castor oil by enema. These produced only a scant, fluid discharge, but gave great relief to the nausea and colic. From this time animal broths and stimulants were retained by the stomach.

Tuesday morning, 8th, castor oil given by the stomach; scant discharges followed, the oil being visible in each stool.

Tuesday night there was a free fœcal discharge, giving still greater relief to the nausea, which was now the most distressing symptom. On this, day Dr. Chas. A. Pope was called as consulting physician, and continued to visit the case until the beginning of convalescence.

During the week, from the 7th to the 18th, frequent nausea, great and increasing prostration, no appetite, extreme thirst, constant demand for ice. Pulse normal; 80 and soft. The tumor larger and more tender; it seemed loosely attached, as it admitted of motion from the side to the middle of the abdomen. During the week the bowels moved occasionally, but very scantily. His only appetite was for buttermilk, which

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we gave him in small quantities frequently, the stomach retaining and digesting well.

Sunday night, 13th, gave castor oil by the stomach; three small evacuations extremely offensive. Up to this time the circulation had exhibited little evidence of disorder, but, after the third stool from the oil on Monday morning, the 14th, the pulse was greatly depressed in strength, and ran up rapidly from 80 to 160 per minute, with extreme irregularity and palpitation. The skin grew cold; great restlessness came on, with mental depression and anxiety. Brandy was freely given, and hot bottles and mustard applied to the spine and extremities; but no reaction could be produced until carbonate of ammonia was given and retained by the stomach. After these alarming symptoms had continued for six hours, they gradually subsided; yet the pulse did not materially improve, but continued above 160 and extremely irregular for thirty days.

From the 14th to the 20th there was no material change in his condition. Besides the steady increase of his debility and emaciation, there was almost a complete loss of muscular power; he could not even turn in bed or raise a limb without assistance. Pulse habitually 160 to 170, and extremely irregular; tumor larger and very tender; bowels moving frequently, but very scantily. Occasionally, at this stage of the attack, substances past in the stools strongly resembling sloughs from the mucous coating of the bowels, but under the microscope it would prove to be inspissated and vitiated mucus. On another occasion at this stage, a long, cylindrical, white, tough, fibro-elastic substance passed, which was six inches long, by a half inch in diameter. It had the appearance of an exudation of lymph, the result, perhaps, of inflammatory action in a constipated bowel.

Saturday, 26th of January, after unusual restlessness and prostration, the bowels began to move freely, the discharges copious and fæcal, mostly hard, lumpy masses and smaller scybalæ, mixed with highly offensive fluid fæces and mucus. The lump of old fæces seemed calcoreous. When dried they

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resembled chalk. Under the microscope it was an amorphous, calcareous substance. We could only account for it by the supposition that it was magnesia, which had been taken before and during the attack, for occasional acidity of stomach; but the quantities he had taken, and the copious discharges of this matter, seemed incompatible with this supposition. Circumstances at the time prevented a chemical test, by which we might have attained a more definite conclusion.

Monday, 28th of January, in the morning, unusually depressed and restless; pulse exceedingly feeble, difficult to count. At 1 P. M., without any immediate cause, he fainted. Skin cold, pulse lost at wrist; under large doses of brandy he rallied for a little while, but soon lapsed into the same condition; total insensibility and unconsciousness, vomiting and involuntary discharges from the bowels, unable to swallow at all. Applied mustard and hot bottles to spine and extremities; large enemata of brandy and quinia, repeated as often as discharged. He remained in this condition for ten hours. Finally, we succeeded in getting him to swallow carbonate of ammonia; under this he rallied. As consciousness returned, the bowels moved more freely; copious discharges of the most offensive fluid fæces. He had no recollection of the ten hours past; with this exception his intellect was clear and intact during the whole illness.

Thursday, 31st of January, bowels still moving from two to three times each day; stools fæcal, containing bloody mucus and highly offensive. Pulse 170 to 180, when it can be counted; tongue highly coated; great exhaustion. Up to this time at least one quart of old fæces have passed, but the tumor is still large and distinct.

February 4th, pulse 145 to 150, more regular and satisfactory. Bowels moving freely; highly offensive fluid discharges. For four days, in addition to the stimulants and quinia, he has been taking pills of inspissated ox-gall, four grains every three hours, until a scruple is taken; then resume again as soon as the bowels show a disposition to constipation. This prescrip-

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tion was made with the view of softening the impaction and hastening the expulsion of the mass without undue prostration. The debility being so extreme at this stage that we feared fatal exhaustion from active cathartics.

February 7th, 8th and 9th, no improvement; tumor still large; pulse 160 and irregular; bowels disposed to constipation.

February 12th, bowels moving freely again; large fæcal stools, offensive and mucous as before. At 6 A. M., of this day, after these discharges, the pulse suddenly subsided to 80 and regular; its fall was as sudden and unexpected as its rise had been thirty days previously.

February 16th, improvement has been steady and satisfactory since the 12th; pulse 75 and regular; tumor disappeared, only the thickened bowel still apparent.

February 20th, still improving; bowels torpid, moving only from enema or laxatives; strength improving, walks his room with assistance. From this time his improvement was slow, but steady and satisfactory. March 12th, moved from his hotel to my residence. April 1st, went to the country; able to walk and exercise moderately at leisure. Digestion good and bowels performing their functions properly.

Aside from the fact that this patient was closely connected in my family, his case has been one of great interest and instruction to me.

With the facts of the whole case before me in copious notes, taken during its progress, the most interesting and unusual features are these, viz.:

First. The suddenness of the attack and the intensity of the suffering; its persistence for ten days without material disturbance in the circulation; then the sudden rise of the pulse to 160, and its persistence at and above this standard for thirty days; its sudden fall at the end of that period.

Second. The obscurity of the diagnosis for so long a period; the insidiousness of the constipation, the bowels having moved

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regularly, the patient had no suspicion that such an accumulation was taking place.

Lastly. The capacity of the bowel to retain such a mass of hardened fæces for forty days, and perhaps longer, without sustaining greater local mischief. Then the exceeding slowness with which the bowel emptied itself after the impaction began to break down.

The details of treatment throughout such an acute and protracted case as this I have not pretended to give. It could not be otherwise than expectant. The two great indications to be fulfilled were, first, to remove the obstruction; second, to sustain the strength of the patient by all possible means while the first indication was being fulfilled. In carrying out the first indication, we gave cathartics and enemata whenever circumstances permitted; for the second we gave concentrated fluid nourishment, and stimulants with tonics, whenever the stomach or rectum would tolerate them. I would call especial attention to the use of ox gall (Fel Bovinum) in this case. Although it did not accomplish promptly all which had been claimed for it by some experienced physicians and eminent authorities, I was convinced of its marked assistance in softening and expelling the fæcal impaction in this instance. The watery stools produced by it on repeated occasions were as copious as those usually following hydragogue cathartics.

Although giving full credit to all our efforts and remedies, I consider that the life of this patient is greatly due to his indomitable will and practical good sense. A man of a different mind and temperament would not have submitted himself to the systematic and long-continued efforts to nourish and sustain strength; the nauseous doses of castor oil and other remedies we found it necessary to administer to a nauseated and disgusted stomach; and to the habitual use, for many weeks, of the rectum as a receptacle for nourishment and cathartic enemata.

Before closing a report of this case, I would express my high

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professional and personal esteem for Prof. Pope and Dr. J. Magoffin for their conduct in the case; also, to Dr. T. F. Prewitt for his many kind and skillful offices in assisting me in the nursing of the patient through many weary nights.

THE WALLED LAKE IN WRIGHT COUNTY, IOWA.

By E. P. Purcell, Esq.

[Communicated for the St. Louis Medical Reporter.]

One of the greatest wonders of the State of Iowa is the Walled Lake, situated in Wright county, in the northwest part of the State. It covers an area of over 2140 acres, according to a late Government survey, and is nearly round, the longest diameter being from north to south. On the east side is a heavy belt of timber, which extends partially around the Lake. There is a wall around the entire Lake, varying in hight from four to twelve feet, according to the nature of the ground, and resembles somewhat the levees on the lower Mississippi, except in the materials used in its construction. The base of the wall is from fifteen to eighteen feet thick, and the top about four feet wide, built with great regularity and skill. It is composed principally of what is called rock boulders, or lost stone, and dirt, with the largest stones at the bottom, some being of great size; and, what is the best evidence of its artificial structure, is the fact that there is none of the rock used in its construction in the immediate neighborhood. The lake is from eight to fifteen feet deep, and very pure and clear, as you can see the smallest fish at the bottom of the deepest part. The bottom is covered with sand and gravel, and looks very beautiful. The Lake is fed by springs and has two outlets, one at the northeast, which runs into the Iowa river, and one on the south side, which runs into the Boon river. The level of the water scarcely ever varies. The water is from two to four feet above the general level of the country.

There can be no doubt but that the wall was formed by

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human hands, and was built around the springs which supply it designedly to form a lake. It was built, probably, by the race that built the Mounds in the West. However, it was at all times evidently a place of great resort for the Indians, as I have found numerous relics, such as stone axes, knives and arrow heads, pottery, etc., near it of very ancient appearance, and not belonging to the present race of Indians. By whatever people built, they evidently possessed more than ordinary capacity, as the work is as perfectly and correctly made as would be done by modern architects. I have lived near the Lake for some eleven years, and during that period there has been no perceptible change in its appearance or level.

LEPROSY, ANCIENT AND MODERN; WITH NOTES TAKEN DURING RECENT TRAVEL IN THE EAST.

By Tilbury Fox, M. D.

(Read before the Medical Society of London.)

In thinking over the writings of some who have dealt largely with the literature of the ancients, the feeling thrusts itself very decidedly upon our notice that the rough details of bygone time are invested occasionally (it is to be admitted somewhat unknowingly) with such importance and significance as to constitute them the very standard of truth, against which there is no appeal. This is especially the case with the writings of Celsus and Hippocrates. The subject of leprosy, amongst others which of late has occupied the attention of many *literati*, is illustrative of the point in view. Our position in regard to it is one of doubt and misunderstanding, because, up to the present time, we have been unable to fathom the significance of the data by which the ancients were guided, and, according to the ideas of pathology now in favor, dovetail our own with the facts of former date. Under these circumstances we have adopted a convenient humility, and chosen to fancy that we are wrong and the ancients right; moreover, that by an examination of the laws of disease, as taught in the earliest days, we shall be able to mould the existent phenomena of our own day so as to fit the explanations thence derived. Little difference is made for variation in expression in language or mode of record between this and the oldest time; the same argu-

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ment carried further would attempt to show that little *progress* is visible.

I am ready to admit that the bold outline and crude material of descriptive medicine may have remained unaltered by the lapse of time, and that, by a careful study of concomitants, we shall be enabled to harmonize the phenomena of different epochs, and to explain modifications; but can not subscribe to any opinion which tends to teach that any retrocession has taken place. But, while differentiation and detail have most abundantly multiplied in the progress of knowledge, the sustainable point has been overstepped, and men have been required to withdraw certain conclusions which were at one or another time fairly held; for, in the development of the special from the general, an enormous mass of new species has been elaborated, which, on subsequent observation, have been found to be *mere varieties*, a phase of revocation which, culminating in the Darwin theory, is the characteristic of the age.

Still, on the whole, the preponderance of trustworthy result is immeasurably in favor of the student of to-day. Progress is traceable in everything except in one particular instance, to which my remarks will now be directed—the biblical account of leprosy. This can not be judged in a manner like to other descriptions. The objects and circumstances connected with it were special; Moses did not wish to teach medicine, but gave certain laws for the guidance and preservation of the Israelitish community—laws which the *priest* should observe, and which, whilst they were perfect *quoad*, the end in view contained only just the very necessary amount of pathology, and were not technically explained. There was sufficient difference in the nature of the forms of disease included under the term leprosy implied in the total difference of treatment. Some were clean and some unclean: Moses was under no necessity of defining pathological details. In the spirit of these remarks, I would be understood as vindicating the position of Moses on the ground of modern research.'

Till within the last few years the solution of points of doubt in the matter of leprosy has seemed so very distant and unlikely as to have appeared a fitting subject to test the powers of a sphinx. Recently the accumulation of observations of small moment, *per se*, has been found to possess such potential interpretation and applicability as to have cleared the way very considerably for the establishment of satisfactory data. I have recently seen a good deal of leprosy during a lengthened tour in Egypt and Syria, and desire to call attention to particulars of its nomenclature and meaning (ancient and modern), without, however, aspiring to any classical discussion as that which appeared from the pen of Dr. Belcher, in a late

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issue of the Dublin Quarterly Journal, but to the hope of being able to reconcile some of the differences of opinion which have been held in regard to leprosy, using that term to signify the elephantiasis græcorum, altogether different from the E. arabum, the Barbadoes leg, or, as it is termed now-a-days, bucnemia tropica. The term lepra has, by its peculiar and varied renderings at the hands of writers, been a source of no inconsiderable obstruction to the foundation of clear conceptions of diseased conditions of the surface. It has been used in four chief senses—

As signifying (1) a special affection, distinct from elephantiasis, and known to moderns as lepra vulgaris (Willan).

2. The same condition, but in the sense of its being an expression of true elephantiasis.

3. The lepra of Holy Writ, a disease supposed to be now non-existent, peculiar to the Hebrews, special in its nature, and different altogether from elephantiasis, and also lepra vulgaris. A view originally propounded by Lorry and Ousseel, and recently Dr. Belcher.

4. True elephantiasis itself, unconnected with modern lepra vulgaris.

In the Levitical code reference is made to many eruptions; but, as concerning the subject of leprosy (elephantiasis), we observe that Moses referred to three superficial forms, independently of the fully-developed disease—(*a*) the boak or dull white; (*b*) the berat cecha or dusky berat; and (*c*) the berat lebona or bright white berat. Celsus arranges these under the term vitiligo; the first, or boak, corresponds to his *alphos*, the second to his *melas*, and the third to his *leuce*. Celsus, moreover, separated the developed disease, elephantiasis, from these superficial forms; hence, Celsus and Moses apparently differ, but of this more in a moment. Now the Greeks made more confusion: with them the term lepra arose, and it is thought was applied to the alphos (boak), the highest degree of lichenes (psora and alphos)—psora coming also from the Hebrew psorat. In the eleventh century Avicenna inculcated and wrote the doctrines of the Greeks, and then arose another error; when the Arabian writings were translated into Latin the term lepra was given very unlicensed application, as explained by Bateman, to the elephantiasis of the Greeks, and the term morphœa was used to the scaly eruption called by the Greeks lepra; hence the general use of the term lepra and leprosy.

Now, it appears to me that an acceptable explanation of all pre-existing contradictions may be readily given, and particularly in consequence of the important observations which have been published by Dr. H. Vandyke Carter, of Bombay. That

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gentleman has shown clearly that there is a period of eruption in the majority of cases of leprosy in India; he noticed it himself in 62 of 186 cases. The eruption assumes two chief forms, a white and a dark variety, corresponding to the leuce and melas, and known as morphœa alba and morphœa nigra. There is resemblance often to lepra vulgaris (alphos); and in India the confusion of these eruptions is common. This morphœa is the *baras* of the Arabs. There can now be no question as to the relation of morphœa and elephantiasis. It is the earliest sign of elephantiasis, and it is easy to understand the different positions of Moses and Celsus. The boak of Moses, which does not render a man unclean, is our lepra vulgaris, or the alphos of Celsus; the berat cecha corresponds to the melas or morphœa nigra; and the berat lebena to the leuce or morphœa alba. Moses did not use his own judgment—he gave as he was commanded; but how curiously his teaching and Dr. Carter's observations agree as regards pathology, and how each is mutually proof of the truth of the other. Celsus was not a Moses, and did not see the relation of the components of his vitiligo, that the melas and leuce were early stages of elephantiasis, and the alphos distinct again. Dr. Carter's observations, I repeat, are opportune and most conclusive. Josephus and others have only followed their predecessors in misplacing alphos; but the time had not come for its solution and separation. Dr. Belcher, in his essay, refers to some remarks at p. 360 of Mr. Wilson's work, where it is said that the term mal rojo, used in Spain, calls attention to the dark red or reddish brown line of the skin, and mal noir to the dusky hue in some cases; and says, it may well be asked, how can mal rojo or mal noir be identical with the bright white berat of Moses, with the scaly lepra of the LXX., or with the disease of Gehazi, who went out of Elisha's presence as white as snow. The foregoing remarks explain that mal rojo and mal noir are but forms of morphœa. Mr. Wilson, I think, does not imply that they had any relation with the disease of Gehazi, or the lepra of the Greeks (alphos). To put it in another way: the pathology of our own day teaches us (1) that Moses' two forms of berat, the leuce and melas of Celsus, and the forms known now-a-days as morphœa alba and nigra, are the same—that they are early signs of the elephantiasis; (2) that the boak of Moses, the alphos of celsus, and our lepra vulgaris, are one and the same disease.

Moses did not refer to the fully developed disease—the tubercular and anæsthetic and ulcerative alterations—but to the earlier stages; and he shows himself a great pathologist here; he actually forestalled the observers of recent time. This is forgotten in all discussions, and is the chief reason why author-

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ities declare that the Israelitish leprosy and the elephantiasis græcorum are not the same. If they compare together the *same stages*, an absolute identity is visible. The results of modern research, to my own mind, give a peculiarly prophetic aspect to the Levitical code, and there can not be a doubt that modern investigation has fully proved its truth.

And, in all this, there is little ground for supposing that any change has taken place in the relative situation of the diseases themselves. The same forms existed formerly much in the same state as at the present day, and there is little, if any, reason to think that the Hebrews were affected by one special form of lepra of which no trace exists now-a-days.

Lorry contended for the past existence of such a form of disease, and Dr. Belcher, at p. 297 of the Dublin Quarterly Journal, says that there is abundant proof that the leprosy of the Hebrews and that of the Middle Ages were as dissimilar as wasting and hypertrophy can be; quite true; and at p. 298, that the Hebrew leprosy was the vitiligo of Celsus. This point has been referred to. Dr. Belcher, in the article referred to, does not seem to allow that lepra vulgaris (Willan), the alphos of Celsus' vitiligo, and Moses' boak, are the same; in fact, this disallowance is the groundwork of Lorry's view, though I gather from the recent edition of Neligan's work that Dr. Belcher has modified his opinion.

Whatever else Josephus states, he certainly most plainly states thus much—that there was no disease such as is contended for peculiar to the Jews. The supposition is unnecessary and most confusing. But I have at hand a fact which is altogether convincing. During the last year (1865), in my travels through Egypt, Palestine and Syria, seeing and hearing as much as possible about leprosy, curiously enough, I found in the vicinity of the Lebanon range that a form of disease is common, of old date, and recognized as distinct from elephantiasis; it is called *baras el Israily*. I declare, from the description, character and seat of the disease, that it is nothing more nor less than lepra vulgaris or alphos. Now, here is, without a doubt, Lorry's Hebrew eruption handed down to us by the Arabs and others, under the most peculiar designation, and yet it is found to be, not a special, but the well known boak of Moses. Ay, and yet more than this, there is an eruption like it, of a dark, scaly aspect, which is distinguished from it, and which is regarded as an early state of elephantiasis. It is the baras of the Arabs. These are very important facts, to my mind, because they are so completely and peculiarly confirmatory of all that has been said.

Though we may clear up all difficulty with regard to the an-

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cient relations of lepra and leprosy, yet perhaps a greater one remains in the determination of the use of the term lepra now-a-days. It is a quarrel about words; and admirably does Max Müller observe, "yet, under a different form, language retains her silent charm; and, if it no longer creates gods and heroes, it creates many a name that receives a similar worship. He who would examine the influence which words, mere words, have exercised on the minds of men, might write a history of the world that would teach us more than any which we yet possess. Words without definite meaning are at the bottom of nearly all our philosophical and religious controversies, and even the so-called exact sciences have frequently been led astray by the same siren voice;" and afterwards adds that he does not refer to a mere show of language, which may deceive, but rather "to words that everybody uses, and which seem to be so clear that it looks like impertinence to challenge them." How very suggestive and teaching! The exact circumstances under which the use of the term lepra arose are not easy to determine. The Greek translators are supposed to have applied it to the alphos. The Greeks must have used the term lepra in a generic sense, for they called the boak lepra alphos, and the berat labena lepra leuce. At any rate, the Arabians used the term thus widely, applying it to elephantiasis, and of course probably only followed in the footsteps of the Greeks, both people recognizing in fact the old notion of the relation of alphos, melas and leuce. Even in India, at the present day, the confusion of lepra vulgaris (alphos) and the eruptive stages of elephantiasis græcorum is very common, and Dr. Carter pointedly refers to this. In fact, these states, always from the time of Moses, have been classed together in consequence of a certain similarity in outward aspect.

However this may be, clearly leprosy can be applied to none other than elephantiasis, and leprosy absorbs lepra, and herein Mr. Wilson is perfectly justified in his views. Let the discussion go on as it likes about the mere use of names, thus much is clear: that Mr. Wilson's suggestion of the use of the word alphos to indicate our lepra vulgaris is not only the most classical, but the most judicious, under the circumstances, If lepra were claimed by no other disease, by all means retain it in its present application; but this is not the case. Leprosy is clearly elephantiasis, and lepra belongs to it. Alphos is no invention coined to supply a deficiency.

The confusion of alphos and true leprosy, and its expressions (morphœa alba and nigra), is apparent, as before cursorily noticed, throughout all the Sacred Writings, in the descriptions; but it is hardly a confusion, because the details of treatment are defined; it is, therefore, rather an alliance; and, if

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we carefully study the concomitants, we shall observe that every fact connected with the two classes of cases only tends to prove that the diseases under notice of that and our own time are the same. In Exodus, chapter iv, verse 6, we read, "And the Lord said furthermore, Put now thy hand into thy bosom. And he put his hand into his bosom; and when he took it out, behold, his hand was leprous as snow." Here is the general or wide use of the term leprous due to the translators. We find again, in Holy Writ, that some did and some did not dwell in places apart from the people, as in the case of Naaman and Gehazi, and the four lepers, on the other hand, who reported the flight of Benhadad's besieging army; the cases of Ahaziah, 2 Kings, chap. xv. verse 5, who was smitten a leper, and "dwelt in a several house;" and 2 Chron. chap. xxvi. verse 21–19; in reference to Uzziah, who was smitten leprous in his forehead, and abode in a several house. Again, in the time of Christ, some stood afar off, and were commanded to go show themselves to the priest, whilst others were touched and cleansed. Further, we observe how the exact rules laid down by Moses continued to be observed with a degree of exactness that is really remarkable, through the mid life of the Hebrews, at the time of Christ, and even till this very day. (The Levitical code bears in the marginal reading of the Bible the date, B. C., 1490, Ahaziah's time, B. C., 800). These observances being enforced by universal consent against a disease which, as elephantiasis, is and has been well defined, and could not by any possibility be mistaken for anything else, so that the strict peculiar observance is a guarantee, under the circumstance, that the original disease has still an existence; and, moreover, when we recollect the rigidity of the continued observance, it is easy to see in this an additional argument to prove that the so called leprosy of Naaman and Gehazi, and those who stood afar off, and lived outside the city, were of different natures. There is the case I have mentioned of baras el Israily and the baras of the Arabs existing side by side, affording to day a complete illustration of the state of things centuries ago. It is then wholly unnecessary to suppose the existence of a disease peculiar to the Jews; their white, scaly eruptions, which did not render a man unclean, is our alphos.

It may be as well, perhaps, to add, for the information of those who are not well acquainted with the subject, that the disease of Naaman was the boak of Moses, the alphos, or, as we in general term it, lepra vulgaris. Let, then, alphos take the place of the latter in future. I pray not to be thought as forgetting the labors of early writers—Aretæus, Galen, Hippocrates, Paulus, Ægineta, Avicenna, Schilling, Ousseel, Bateman, Mason Good—since I have confined myself especially to

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comments on Dr. Carter's researches, and the clearly expressed views of Mr. Erasmus Wilson; all, however, with the silent current of clinical observation, have settled, it appears to me, the dubious points in regard to elephantiasis, save the position and use of the word lepra—an intrusion of the Greeks which we can well do without. Great value should be attached to the diagnosis of the eruption of true leprosy. I have lately seen a most remarkable example in a patient of Mr. Erasmus Wilson, which was considered by every one who had seen it to be syphilitic. The subject was a genileman holding an official post in India, and all the members of the medical staff reported upon the case as one of syphilitic disease; the individual was mercurialized and mercurialized again, of course without any effect of a beneficial kind.

Whilst upon the subject of leprosy, I may add one or two short notes on some few points which I have ascertained during my recent trip through the East. At Cairo, leprosy is met with amongst the Christians and the Hebrews. At Jerusalem lepers are plentiful; there is no hospital, but a quarter of the town is set apart for them. The lepers mostly come from the surrounding villages, and are generally of Arab origin. At Nabulus a like state of things is met with; there are some 200 lepers who live outside the town. A few lepers are found in other parts of the country, but they generally congregate at Nabulus or Jerusalem. At Damascus there are now only four lepers in the leper hospital, two men and two women; the others, for there were many some years ago, were destroyed during the massacre which happened five years ago. These lepers came from around Mount Lebanon chiefly, and are mountaineers. There are other instances to be met with in the Hauran. It is said that there is no known case of leprosy in a Hebrew at the present time in Syria. Stray cases of leprosy you come across here and there in the various villages in the line of tour. By leprosy I mean elephantiasis græcorum.

In the first place, it is clear that all these poor creatures have lived in the very foullest of dwellings, without ventilation, without any attempt at cleanliness, the same room often being occupied by animals and human beings together. The food, too, used by these folks is bad: rice, lentils, sour milk and rancid zibda, which is a kind of stock-grease or butter, made by boiling down fat and butter, with the view of keeping it eatable for some time. It appear, too, that a good proportion of the people about Damascus consume olive oil, which is often rancid. It would appear, from what I have seen, of the zibda or butter, that the people like things which are tasty and strong, and this is often arrived at by the addition of garlic to the very nasty fatty compound which they call zibda.

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The evidence as to fish-eating habits is not altogether satisfactory. In Cairo you meet with plenty of stale fish—the native Christians and Jews eat it, especially a compound of preserved or spotted fish, which I think they call "fasciah." You can obtain plenty of evidence as to the nature of this mess in one part of the city adjoining the Nile, where its preparation is carried on, in the horrible stench which quite sickens you. At Jerusalem there is plenty of stale fish in the bazaars, but it does not seem to be eaten especially by any particular class; besides, the lepers have come from various places afar off. At Nabulus the habit can not be traced, nor indeed at Damascus; but, what is pretty much the same thing as before remarked, there seems to be a good deal of rancid fatty matter used by those affected. Fish-eating habits, where the quality of the fish is bad and stale, seem to be a prominent feature in the history of lepers; the disease in its widest migrations and topographical habitats, has always followed, and does now follow, being confined almost to, the banks of large rivers and seacoasts in the most northern and cold as well as southern and warm climes. Elephantiasis, on this account, has been looked upon as a malarious fever; and, where there is any exception to this rule, if there be not the evidence of actual ichthyophagic habits, yet is there of that which is pretty much the same thing, viz.: the consumption of rancid, oleaginous substances. It would be well that our Indian inquirers should sift this matter thoroughly, and the analogous case of the consumption of bad rice. It is curious that in England, when leprosy was common, there should have been a large consumption of fish; indeed, salmon was so plentiful that a special clause used to be inserted into the indentures of apprenticeship at Gloucester, that the apprentice should not be compelled to eat it more than twice or thrice a day. The analogies in the medical history of leprosy, and such states as pellagra, which are in great degree dependent upon bad food, are very striking, and present interesting points for observation. It is worth observing, that lepers affirm if they eat any oil at any time, the disease (especially the pains in the limbs) is much worse. At Nabulus the great cause of the continuance and extension of leprosy is the complete intermarriage of lepers which takes place, and one is really surprised that the government does not legislate in the matter. I fully believe that the interdiction of the marriage of lepers would almost, *per se*, be sufficient to eradicate the disease within the term of a century. The migration of leprosy is prevented by this one circumstance. Lepers have few children; of these latter some escape the disease, but many become affected: this may happen at any (early or late) age, generally where hereditary transmission is very strongly marked, between

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the ages of six and ten. In Syria it is thought that, if intercourse take place during the period of menstruation, the child begotten about that time is almost sure to be leprous. In Jerusalem it is imagined by some that connection with animals is a *vera causa*.

The form of leprosy is the tuberculous; it kills perhaps in from four to six years, or gets on to a certain pretty advanced stage, and then remains positively stationary for the rest of life. If treated in the early period, it is said to be susceptible of cure by mercurial remediation; but the evidence (three cases) on this point is very doubtful. Males are more liable than females to be affected in the proportion of about three to one. The disease is not known to be contagious in any way or degree. It has no relation to syphilis. This seems very clear: elephantiasis existed (and indeed is mentioned in the Koran under the name of "jezzam") long before syphilis was known in Syria. The latter was imported by the French, and to this day is known as the "Frank boil"—a circumstance having of course a very important bearing upon the question of the relation of lepra vulgaris (alphos) and syphilis. If it be true that syphilis did not exist in Eastern climes until within recent times, then is it a very significant argument against the non-syphilitic source of lepra. There are many authorities who think that lepra vulgaris is an old form of syphiloderma.

With regard to the contagiousness of leprosy, only one fact has come under my notice. It was that of a European who, in a tipsy state, cohabited with a leprous woman, and who, be the explanation what it may, actually became leprous, and in this patient the disease is progressing. In the East the disease is not considered to be contagious.

I have tried in this paper to explain away difficulties, and to harmonize the various observations of differing authorities. In conclusion, it would have been interesting to have traced out the modern relations of elephantiasis; but, as this is rather a wide subject, its consideration must be attempted in a separate paper. Suffice it for the present to sum up as regards the past—that Moses clearly indicated the relation of three forms of eruption, two of which were early signs of elephantiasis, the third being similar but distinct in nature. Celsus, not seeing any relation between these eruptions and fully-developed elephantiasis, classed them together under the head of vitiligo; he, moreover, did not, as Moses did, differentiate the boak or alphos. The Greeks introduced the generic term lepra, particularizing each species by additional names, one of which, alphos, designated Moses' boak. The Arabians adopted the Greek ideas, and from their time to the present there has been a recognition of the view which is so completely confirmed by Dr. Car-

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ter's observations, that the alphos (our lepra vulgaris) is a disease *sui generis;* and the two forms of eruption described by Moses, by the Greeks under the terms leuce and melas, and by moderns morphœa alba and morphœa nigra, are modifications of one form of disease, and early stages or indications of that altered state of nutrition which results in true elephantiasis. That every fact tells against the theory that the Jews were affected by any form of disease peculiar to themselves, not the least being the existence of a form of eruption of ancient date in the East, known as baras el Israily, recognized distinctly as alphos, and as different from another form existing side by side, the baras of the Arabs, or our morphœa.

One word, in conclusion, in reference to the Leprosy Committee of the College of Physicians. I have very good reason to know that a large number of reports have been returned to England from consuls and other non-medical men. Now, these must contain, of course, the prevalent opinion and prejudices of the people, some of which are most extraordinary; and, inasmuch as no strictly medical criticism and analysis has been exercised in the selection of facts, a source of very considerable error may (if care be not taken) creep into and invalidate the labors of the committee, who of course deal only in a great measure with what is actually, and in fact the equivalent of, hearsay evidence.—*Edinburgh Medical Journal.*

AN ARTIFICIAL VAGINA.

By Wm. H. Hingston, Surgeon to the St. Patrick's Department of the Hotel Dieu at Montreal.

In the summer of 1859 I was asked to see Miss ——, of this city, aged twenty-three, who, I was informed, had never menstruated, and who had suffered greatly in consequence. Miss ——— was a stout, red-faced girl, with bloated, swollen face, and presented an appearance of general plethora. She told me her sufferings were almost incessant, but were more severe for a few days in each month; and this condition of things had continued from the age of fourteen, with gradually increasing severity. Her days were passed in pain, and her nights in troubled and disordered sleep, in feverish dreams or wakefulness. Several years before, she had, by the advice of her physician, commenced taking morphia, which she had rapidly increased in quantity, without being rendered oblivious to her sufferings; and the sleep, into which she would sometimes fall, was so labored, and the breathing so stertorous, as frequently to oblige her parents to arouse her. Several physicians had

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been consulted during the long course of her sufferings, and as my patient had retained a list of the medicines employed by each, it presented a most formidable array of emmenagogues, cathartics, sudorifics, and stimulants. As the potent armamenta of the materia medica had already been pretty fairly exhausted, I proposed a tactual examination. To this, however, there were objections, until the very intelligent midwife, who had been instrumental in having me consulted (and who, at my request, made an examination) had informed the patient she was unlike the rest of womankind. On inspection, the mons veneris was very scantily supplied with its usual covering, and the cushion of adipose tissue over the symphysis pubis was neither thick nor firm. The meatus urinarius existed at its normal site, and a little below there was a slight depression marking the place of the vagina. But there was no preputium clitoridis—no clitoris—no labia or nymphæ—no vestibule, An examination, per rectum, established the existence of an uterus, but, with the catheter at the same time in the urethra, no interposed vagina could be felt. I at once proposed to remedy, surgically, this anomalous state of things, hoping a division of the skin—which seemed to be thin—would lead to something like a vagina. Consent having been obtained, I made the first incision on the 23d of June, 1859, from within three lines of the meatus to within the same distance of the rectum.

Here and there, in the line of the incision, I met with condensed areolar tissue, but no vestige of a vagina. I now made up my mind that there existed no natural passage, and that it was necessary to hew one out of the soft tissues. A day was named for the purpose, and in the meantime a large fine Turkey sponge was immersed in a thick solution of gum acacia, and submitted to enormous pressure for a few days, by which it was reduced to the thickness and hardness of sole leather.

On the 27th June the patient was placed under the influence of chloroform, and an incision, the length of the first, was made in the mesian line; a three-valved speculum was introduced, and through it several narrow strips of hardened sponge. The hemorrhage during the operation was somewhat alarming; but, after my departure, the quantity of blood lost was so great as to soak through the bed, run in a stream upon the floor, and induce frequent syncope. When hastily summoned to the bedside I removed the thickly swollen slices of sponge by strings, which had, previous to their introduction, been attached to each piece; and employed astringent injections. The hemorrhage gradually ceased; not, however, till I

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had time to reflect that Simpson's fate—under somewhat similar circumstances—was to be mine, with a *renomée*, however, less able to bear a shock which had almost unseated the advocate of histerotomy. Two days after the removal of the sponge, I re-introduced fresh pieces through the speculum—the patient being under the influence of chloroform—and repeated this proceeding, without chloroform, every second day for a fortnight, when, by coaxing and urging, I induced the patient to submit to the knife again, assuring her friends and herself that the hemorrhage on this occasion would be inconsiderable, as I could feel the uterus at a short distance from the wound already made.

On the 15th of July, another and a deeper incision was directed upward and backward, and still in the mesian line, when the os uteri was reached—full, thick-lipped, and pouting. No discharge or secretion of any kind escaped, though an elastic bougie was made to enter the interior cavity to the usual depth. I now had a vagina formed, suited to any purpose, and the compressed sponge still increased its capacity. The sponge was removed, and fresh pieces introduced every second day for several weeks, when the speculum, covered with lint, was substituted—introduced in the ordinary way, and the handles secured together. A fortnight after the last operation a very moderate secretion took place, which increased at the succeeding menstrual periods, with complete relief to all those distressing symptoms for the relief of which she had consulted me. The morphia was laid aside, and sleep, without it, was sound and refreshing; and the patient, from a bloated, swollen, and apoplectic looking object, became as slender and as genteel as she could have desired. The dilating process was continued for several months.

Some time ago I was asked my opinion concerning her marriage (then on the *tapis*), and, after an examination, unhesitatingly counseled it. (The smooth walls of the artificial vagina were now lubricated with a secretion, and the organ was of the ordinary capacity.) The marriage took place, and the lucky possessor of the slim *unweibliche fraulein* is still, so far as I am aware, ignorant of the circumstance that the knife had carved for him a path to enjoyment. And now I have to mention what to me appears the most remarkable circumstance in the case. Previous to the operation there was no sexual desire, but when menstruation had been fairly established there was a difference in that respect; and after marriage, gratification had increased with sexual indulgence. The patient has not become pregnant.—*Canada Medical Journal.*

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THE MEDICAL REPORTER.

ST. LOUIS, MAY 15, 1867.

Convention of Professors of Medical Colleges of the United States.—We have received, from our special correspondent, the following interesting proceedings, which we lay before our readers, reserving comment for some future time:

In pursuance of a call of the Committee appointed by the American Medical Association, at its last session, held in Baltimore, May 2, 1866, delegates from most of the medical institutions of the country met Friday, May 3, at 10 o'clock A. M., in the Faculty-room of the Medical College of Ohio.

Professor Davis, of Chicago, called the meeting to order and stated its object. Prof. A. Stille, of Philadelphia, was chosen Chairman, and Prof. G. C. E. Weber, of Cleveland, Secretary.

The following named gentlemen were approved as delegates:

Humboldt Medical College, St. Louis, Mo., Prof. A. Hammer and Dr. A. J. Steele; Missouri Medical College, St. Louis, Mo., Prof. Jos. N. McDowell; Chicago Medical College, Chicago, Ill., Profs. W. N. Byford and N. S. Davis; University of Pennsylvania, Philadelphia, Pa., Prof. A. Stille; Jefferson Medical College, Philadelphia, Pa., Prof. S. D. Gross; University of Michigan, Ann Arbor; Mich., Prof. A. B. Palmer; Berkshire Medical College, Pittsfield, Mass., Prof. A. B. Palmer; Albany Medical College, Albany, N. Y., Prof. Alden March; Starling Medical College, Ohio, Prof. Francis Carter; Charity Hospital Medical College, Cleveland, Ohio, Prof. G. C. E. Weber; Medical College of Ohio, Cincinnati, Profs. C. G. Comegys and Geo. C. Blackman; Cincinnati College of Medicine, Profs. Read and B. L. Lawson; Miami Medical College, Cincinnati, Profs. E. B. Stevens and Geo. Mendenhall; University of Louisville, Ky., Prof. Jos. M. Halloway; Medical Department of Iowa Univer-

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sity, Keokuk, Profs. N. R. Taylor and J. C. Hughes; University of Maryland, Baltimore, Prof. F. Donaldson; Toland Medical College, San Francisco, Prof. T. M. Logan.

Professor Holloway, of Louisville; Davis, of Chicago; Donaldson, of Baltimore; Blackman of Cincinnati; and March, of Albany, were appointed a committee to report on the order of the different subjects which were to occupy the attention of the Convention.

After which the Convention adjourned to 4 o'clock P. M.

In the afternoon session this committee reported the following distinct propositions for the consideration of the Convention:

"1. That every student applying for matriculation in a Medical College shall be required to show, either by satisfactory certificates or by a direct examination of the faculty, that he possesses a thorough knowledge of the common English branches of education, including a series of mathematics and the natutral sciences, and that the certificates presented, or the results of the examinations thus required, be regularly filed a as part of the records of each Medical College.

"2. That every medical student be required to study not only three full years, but also to attend three regular annual courses of Medical College instruction, before being admitted to an examination for the degree of Doctor of Medicine.

"3. That the *minimum* duration of a regular annual lecture term, or course of Medical College instruction, shall be five calendar months.

"4. That every Medical College shall embrace in its curriculum at least *thirteen* professorships, including substantially the following branches, namely: Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry, Materia Medica, Organic Chemistry and Toxicology, General Pathology and Public Hygiene, Surgical Anatomy and Operations of Surgery, Medical Jurisprudence, Practice of Medicine, Practice of Surgery, Obstetrics and Diseases of Women, Clinical Medicine and Clinical Surgery. That these several branches shall be divided into three groups or series, corresponding with the three years required for medical study. The first, or freshmen series, shall embrace Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry and Materia Medica. To these the attention of the student shall be mainly restricted for the first year of his studies, and on them he shall be thoroughly examined by the proper members of the faculty at the close of his first

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course of Medical College instruction, and receive a certificate indicating the degree of his progress. The second, or junior series, shall embrace Organic Chemistry and Toxicology, General Pathology, Public Hygiene, Surgical Anatomy and Operations of Surgery and Medical Jurisprudence. To these the attention of the medical student shall be directed during the second year of his studies, and on them he shall be examined at the close of his second course of Medical College instruction, the same as after the first. The third, or senior series, shall embrace Practical Medicine, Practical Surgery, Obstetrics and Diseases of Women, with Clinical Medicine and Clinical Surgery in hospital. These shall occupy the attention of the student the third year of his medical studies, and, at the close of the third course of Medical College instruction, he shall undergo a general examination in all the departments as a prerequisite for the degree of Doctor of Medicine.

"The instruction in the three series of branches is to be given simultaneously, and to continue throughout the whole of each annual college term; each student attending the lectures on such branches as belong to his period of progress of study, in the same manner as the Sophomore, Junior and Senior classes each pursue their respective studies simultaneously throughout the collegiate year in all our literary colleges.

"5. That the practice of selling individual tickets by members of Medical College Faculties should be abolished, and, in place of it, each student should be charged a specific sum for each annual course of Medical College instruction; the sum being the same for each of the three courses before graduating; and any student or practitioner who has attended three full courses in any one college shall be entitled to attend any subsequent course or courses in that college gratuitously. The fees paid for each annual course of College instruction should be paid to the Treasurer of the College, and subsequently distributed to each member of the Faculty at such time and in such proportion as the Trustees and Faculty of each college shall determine.

"6. That, inasmuch as the maintenance of an efficient Medical College requires large expenditure of money annually; and, inasmuch as there is no reasonable hope of adequate endowments from the several State Governments, the exaction of a just and reasonable annual lecture fee is a necessity with which all Medical Colleges should comply; and that $105 should be the minimum fee for each regular annual course of instruction in any Medical College in the United States."

The first was taken up and discussed by Professors Davis,

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Gross, Comegys, McDowell, Hammer, Tayler, and Palmer, and after amendment adopted as follows:

1. That every student applying for matriculation in a medical college shall be required to show, either by satisfactory certificates or by a direct examination by a committee of the faculty that he possesses a thorough knowledge of the common English branches of education, including the first series of mathematics, and sufficient knowledge of Latin and Greek to understand the technical terms of the profession; and that the certificates presented, or the results of the examination thus required, be regularly filed as a part of the records of each medical college.

On Saturday further discussion took place, and the following were adopted:

2. That every medical student be required to study not only four full years, but also to attend three regular annual courses of Medical College instruction before being admitted to an examination for the degree of Doctor of Medicine.

3. That the *minimum* duration of a regular annual lecture term, or course of Medical College instruction, shall be six calendar months.

4. That every Medical College shall embrace in its curriculum at least thirteen professorships, including substantially the following branches, to be taught by not less than nine professors, namely: Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry, Materia Medica, Organic Chemistry and Toxicology, General Pathology and Public Hygiene, Surgical Anatomy and operations of Surgery, Medical Jurisprudence, Practice of Medicine, Practice of Surgery, Pathological Anatomy, Diseases of Children, Obstetrics and Diseases of Women, Clinical Medicine and Clinical Surgery.

That these several branches shall be divided into three groups or series, corresponding with the three courses of Medical College instruction required.

The first, or Freshmen series, shall embrace Descriptive Anatomy and Practical Dissections, Physiology and Histology, Inorganic Chemistry and Materia Medica and Therapeutics.

To these the attention of the student shall be mainly restricted during the first course of Medical College instruction, and in these he shall submit to a thorough examination by the proper members of the Faculty, at its close, and receive a certificate indicating the degree of his progress.

The second, or Junior series, shall embrace Organic Chemistry and Toxicology, General Pathology, Morbid Anatomy and

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Public Hygiene, Surgical Anatomy and Operations of Surgery, and Medical Jurisprudence. To these the attention of the medical student shall be directed during his second course of medical college instruction, and in them he shall be examined at the close of his second course in the same manner as after the first.

The third, or Senior series, shall embrace Practical Medicine, Practical Surgery, Obstetrics, and diseases peculiar to women and children: with Clinical Medicine and Clinical Surgery in hospital. These shall occupy the attention of the student during the third course of college instruction, and at its close he shall be eligible to a general examination on all the branches as a prerequisite to the degree of Doctor of Medicine. The instruction in the three series of branches is to be given simultaneously, and to continue throughout the whole of each annual college term; each student attending the lectures on such branches as belong to his period of progress in study, in the same manner as the Sopohmore, Junior and Senior classes each pursue their respective studies simultaneously throughout the collegiate year in all our literary colleges.

On motion, section 5 was laid on the table.

After which the Convention adjourned till the following Monday.

The meeting was called to order by Professor Stille, at ten o'clock, A. M., Monday.

The minutes of the previous session were read and approved.

Professor Gross moved to reconsider parts of section four, relating to the branches to be taught in Medical Colleges.

Professor Hammar moved to suspend the rules for that purpose. Carried.

Professor Gross moved to amend part first, section four, by inserting the words "Medical Ethics" after the words "Medical Jurisprudence."

Professor Palmer moved the adoption of the amendment. Carried.

Professor Comegys moved the reconsideration of section one.

After suspension of the rules this motion was adopted.

Professor Comegys moved to amend section one, by inserting "Elements of Natural Sciences" after the word "Mathematics." Carried.

Professor Hammer moved the adoption of the whole section as amended. Carried.

Section six was then considered.

On motion of Professor Donaldson it was laid on the table.

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Professor Palmer then introduced the following resolution:

"*Resolved*, That every Medical College should immediately adopt some effectual method of ascertaining the actual attendance of students upon its lectures, and other exercises, and at the close of each session of the attendance of the student a certificate, specifying the time and the courses of instruction actually attended, should be given; and such certificates only should be received by other colleges as evidence of such attendance."

The resolution was adopted.

Professor Davis moved the adoption of all the section as amended. Carried.

Prof. Gross moved to transmit a copy of these sections as adopted by this Convention, certified to by its officers, to the American Medical Association, at its next session.

Prof. Davis then introduced the following resolution:

"*Resolved*, That a committee of five be appointed by the President, whose duty it shall be to present the several propositions adopted by the Convention to the Trustees and Faculties of all the Medical Colleges in this country, and solicit their definite action thereon, with a view to the early and simultaneous practical adoption of the same throughout the whole country. And that the same committee be authorized to call another Convention whenever deemed advisable."

The Chair appointed the following gentlemen that committee: Profs. Davis, of Chicago; Donaldson, of Baltimore; Gross, of Philadelphia; March, of Albany; Blackman, of Cincinnati.

The Chairman then introduced Dr. Vattier, President of the Cincinnati Academy of Medicine, who invited the members of the Convention to be present at the opening of the Academy in the evening.

Prof. March moved to accept the invitation. Carried.

On motion of Prof. Davis, a vote of thanks was returned to the Chairman and Secretary of the Convention, for the efficiency with which they have discharged their duties, and to the Faculty of the Ohio Medical College for the use of their hall.

The President returned his thanks to the members of the Convention in a neat and appropriate speech.

Prof. Stevens moved that a formal written thesis on some professional topic shall still be regarded as one of the indispensable requirements for the doctorate.

Remarks were made by Professors Stevens, Comegys and Donaldson.

Professor Davis then rose simply to suggest whether there was not some danger of entering upon the consideration of propositions involving details that might unnecessarily com-

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plicate the great leading object for which we have been laboring. Whether the time-honored and universal custom of requiring the medical students to write a thesis should be insisted on or not, would have but little bearing on the great principles involved in the revision of our system of medical education. If the standard of preliminary education which we have here adopted should be carried into effect, it would remove one of the objects for which the writing of a thesis was originally demanded. Yet, he said, it was desirable to retain the practice, if for no other purpose than to encourage every student in the habit of expressing his thoughts on paper. But the great and all-important object of this Convention was simply to place the system of medical education in this country upon sound educational principles, by erecting a standard of preparatory education, by increasing the period of study, by adding to the college courses, and by determining a rational order of study. This we have now done, so far as this Convention is concerned, by the harmonious adoption of the five propositions already passed upon. And he earnestly suggested whether we had not better stop here, and devote the remainder of our time to the work of devising the most efficient means to secure the adoption and simultaneous practical execution of the provisions already agreed upon by all the colleges of our country; and leave all minor matters of detail to be determined as time and circumstances should indicate in the future.

Thereupon, on motion of Prof. Hammar, the Convention adjourned, subject to the call of the Committee.

Female Practitioners of Medicine.—There seems to be a decided tendency at the present time for women to assume the right of following the various professions and thrusting themselves forward as candidates for public favor and patronage; and, as these places have heretofore exclusively been filled by men, it becomes us to inquire into the expediency of such a bold innovation on our time-honored customs.

The practice of medicine has been especially attractive to them, and so far has this gone that we even hear of a Female Medical College in Philadelphia. We must say that we are sorry at this, as we think, unnatural effort to unsex the female —for it really amounts to that—and thus destroy, in our opin-

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ion, the sanctity and purity of her position and character; and we can not see these innovations attempted without entering our solemn protest.

In a medical point of view, the graduates of this Female Medical College come before the public for patronage, and the professional man is called upon to recognize or reject the system, to receive them on full equality, and, if occasion require, consult with them, or reject them as practitioners entirely. We do not here refer to the midwife or nurse, but to the so-called regular graduates of medicine. Already have several medical societies in the East had the matter up for discussion, and we see in a late number of the *Medical and Surgical Reporter* that the subject was fully and ably discussed before the Philadelphia County Medical Society, and the following remarks by Dr. Bell we most heartily endorse:

"Looking to the usefulness and dignity of the profession, which are inseparably connected with the welfare of the community, we are not without very grave objection to women taking on themselves the heavy duties and responsibilities of the practice of medicine. Their success in the walks of general literature, and even in some instances of science, which allow them a choice of time and season for intellectual labor, can not be adduced as arguments in favor of their ability to bear up under the bodily and mental strain to which they would be unceasingly subjected in this new vocation. The physiological peculiarities of women, even in single life, and the disorders conseqnent upon them, can not fail frequently to interfere with the regular discharge of her duties as physician in constant attendance on the sick. How much greater must be the interruption to her duties if she enter the married state and becomes a mother and nurse. The delicate organization and predominance of the nervous system render her peculiarly susceptible to suffer, if not to sink, under the fatigue, and the mental shocks which she must encounter in her professional round. Man, with his robust frame and trained self-command, is often rarely equal to the task. The home influence of woman is one of the greatest benefits growing out of Christian civilization. More especially is this manifest when we look at her as the head of the household, a helpmate to her husband, and the confidante, guide, instructor and loving friend of her children, whose future happiness and respectability so much depend on her tuition and example. What would be the state of the

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household—what the present condition and future prospects of the children, deprived to a considerable extent of their natural guardian, who would be engaged all day, and not secure against calls at night, in the service of the sick? Nor when at home can the mother, worried and fretted and anxious about her patients, give healthy milk to her infant, or be in a fit frame of mind to interchange endearments with her beloved little ones, to receive their confidences and offer advice.

Once embarked in the practice of medicine, a female physician will not long confine herself to attendance on persons of her own sex. Curiosity, caprice, the novelty of the thing, would induce some men to ask the professional advice of a woman doctor. It is sufficient to allude merely to the embarrassments which would be encountered on both sides, in her visiting and prescribing for persons of the opposite sex. If her services be restricted to the female portion of the family, then must there be a male physician to attend on the males, and thus there will be constantly two physicians in the regular service of a family, with all the chances of counter prescriptions and advice and breach of ethics, misunderstanding and heartburnings, by each one passing the lines of the other. If a female physician be once received in full standing and professional intercourse by consultation, or at other times with a physician of our sex be allowed, the greatest latitude will be taken and given in the statement of the case of disease, whatever it may be, its symptoms and causes, and questions of treatment, therapeutical and psychical. Will woman gain by ceasing to blush by discussing every topic as it comes up with philosophic coolness, and man be improved in the delicate reserve with which he is accustomed to address woman in the sick room? The bounds of modesty once passed in this professional intercourse, will the additional freedom of speech and manner thus acquired impart grace or dindity to a woman in her new character?

"Could women be induced to see the true line of duty in relation to medical study, it would be to learn preventive medicine and acquire a suitable knowledge of physiology and hygiene, so as to be able to preserve their own health and that of their children, and to inculcate on the latter the close connection between the physical and mental well-being of our nature, The field is large, and its cultivation would richly repay the laborers in it.

"In no other country than our own is a body of women authorized to engage in the general practice of medicine The specialty of midwifery practice in France is hedged in by regulations which call for the assistance of medical men in any case of difficulty and doubt."

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The Society then unanimously adopted the following resolution, which fully settles the position of the Society on the question:

"*Resolved*, That, in conformity with what they believe to be due to the profession, the community in general, and the female portion of it in particular, the members of this Society can not offer any encouragement to women becoming practitioners of medicine, nor, on these grounds, can they consent to meet in consultation such practitioners."

The subject has not been presented in a personal form in this city, and we sincerely trust we may never be called on to take it under serious consideration. Still it is well for the profession to bear the matter in mind and know what is transpiring in other parts of the country.

Sanitary Circular of the Surgeon-General of the United States Army.—The following interesting and practical circular has just been issued by Surgeon-General Barnes, and contains instructions that would be useful to all. Our city authorities could not do better than to adopt most of the suggestions contained in it:

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., April 20, 1867.

In view of the possible prevalence of cholera during the approaching summer, the following instructions are promulgated: Every endeavor will be made by medical officers to prevent the introduction of cholera from infected commands, or its conveyance from point to point, by a "quarantine of observation" upon all detachments of recruits or troops arriving or departing from depots, posts, or recruiting stations, at or near which this disease prevails. Prompt reports of its appearance in commands, either en route or in garrison, and isolation of all cases, so far as practicable. In addition to the strictest hygienic police enforcement of personal cleanliness and thorough disinfection, attention should be paid to the quality of the water used for drinking and cooking purposes. When pure rain water can not be procured in sufficient quantities, and the spring or river water contains organic impurities, it should be purified by distillation or the noxious matter precipitated by

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permanganate of potash, from half a grain to one grain of the crystallized permanganate, or its equivalent in solution, added to one gallon of water, should produce a decided pinkish hue, which disappears in twenty-four hours, if the salt has not been used in excess. The water should then be drawn off and is ready for use. Turbid water, such as that of the Rio Grande, Lower Mississippi and its tributaries, should be filtered and allowed to settle before using. The deposit of impurities can be hastened by the addition of powdered alum in small quantities, well diffused by stirring. It is always, but more especially in times of threatened danger of pestilence, the duty and privilege of medical officers to submit the practical suggestions of experience and professional knowledge for the protection of the health of troops to their commanding officers; and the history of the epidemic of cholera in 1866 shows that only by combined and untiring vigilance, energetic action and rigid enforcement of hygienic measures within the reach of every commander can we hope to avoid, keep in check, or eradicate this disease. Beside the usual reports of sick and wounded, every medical officer in charge of cholera cases will forward to the Surgeon-General's Office, at the close of each month, a list of cholera patients, in the following form: [Here follows the form.] Successful methods of treatment and the results of autopsies will also be communicated. The senior medical officer at every post at which cholera appears will make a special report to the Surgeon-General, setting forth any facts he may be able to ascertain as to the introduction of the disease, and especially those bearing upon its importation from infected points by recruits or others, or its apparently spontaneous origin at the post.

J. K. Barnes,
Surgeon-General U. S. A.

Magnitude of the Earth. — The circumference of our globe is 25,020 miles, and so stupendous a circle may be best comprehended by comparison. For example, a railway train, traveling incessantly, night and day, at the rate of twenty-five miles an hour, would require six weeks to go around it. The cubical bulk of the earth is 260,000,000,000 of cubic miles, and, according to Dr. Lardner, if the materials which compose it were built up in the form of a column, having a pedestal of the magnitude of England and Wales, the height of the column would be nearly four and a half million of millions of miles. A tunnel through the earth from England to New Zealand would be about 8,000 miles long.

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St. Louis Medical College.—Our friend and co-editor, Dr. J. S. B. Alleyne, has recently been elected as Professor of Materia Medica and Therapeutics in the above institution, in the place Dr. F. W. White, resigned; and, while we congratulate the doctor on his promotion to the important position, we also congratulate the St. Louis Medical College on securing the services of so able and talented a gentleman. Dr. Alleyne has filled the position of Professor of Materia Medica in the St. Louis College of Pharmacy for several years, and, from long familiarity with the subject as a specialty, is peculiarly fitted for the position. O. F. P.

Humboldt Medical College.—We are pleased to announce that there will be a summer course of lectures at this Institution, commencing May 13th. This is a step in the right direction. In a course of this kind much useful knowledge can be imparted which remains untouched in the regular winter lectures. We trust the undertaking will receive due patronage. Fees for course, $15. For further particulars, apply to Prof. A. Hammer, Dean.

Personal.—We learn with pleasure that Dr. F. McArdle has been appointed Professor of Chemistry in the Humboldt Medical College. We congratulate the gentleman on his appointment, and feel assured that the College will profit by the association.

The College of Pharmacy.—At the last meeting of this College, the following gentlemen were appointed Trustees for the ensuing year: Messrs. T. Kalb, T. Tanton, W. H. Crawford, H. F. Metzger, M. Dimmitt, J. S. B. Alleyne, M. W. Alexander, E. J. Williamson, A. Godron, J. McBride, H. Kirchner, A. Maurer, F. W. Sennewald, A. T. Hollister, J. R. Coleman, A. Wadgymar, J. T. Hodgen, H. Foerg.

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THE SAINT LOUIS

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EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

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SYPHILITIC DYSCRASIA—NEURALGIA.

By Jos. ADOLPHUS, M. D., Hastings, Mich.

[Communicated for the St. Louis Medical Reporter.]

There are few subjects in the domain of medical science that are more forbidding than that now to be considered.

The study of syphilis has only lately been correctly pursued. What little we know concerning it, however, is of inestimable value to mankind. However much we may look for light to pathology, there are nevertheless paths leading to scientific truth that can not be traveled by either the microscopist, the anatomist or the chemist. Syphilis, in making its ravages on the system, is wont to select certain tissues or localities as its chosen haunts. As primary and secondary syphilis are always comprehensible and fully tangible, their treatment is actually easy and convenient. This, however, can not be affirmed of tertiary syphilis. It is impossible to determine how far tissues are affected by syphilis, nor do we know to what extent its poison may modify function. We are continually seeing evidences that syphilitic poison does exercise an enduring influence on many of the tissues, and may even more or less modify the function of an organ. This is a fact that has not received sufficient attention.

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Why it is that a toxic influence can and does resist the active influence of the life forces, and puts itself in the place of normal function, reproducing itself and appropriating nutriment for its repair and maintenance, is a question I am unable to answer. How it is that such a poison can maintain a separate and independent existence in the economy, is found only in the fact that the primary disease has lowered the forces of molecular life to such an extent as to depress the eliminating powers and depress the whole process of interstitial digestion and nutrition. The syphilitic poison must be endowed with tenacious life capacity. When the life forces of the organism are below the normal standard—when they are inferior to the force of the poison—as a matter of course, the latter must control the former. But the most interesting part of our inquiry is in relation to certain nervous disorders that result from the toxic influence.

It is evident that this form of syphilitic disease is certainly brought about by a certain depravity of nutrition.

When a dyscrasia syphilitica is established, its existence is dependent on some particular tissue, being selected by the poison as its special abode, and in which it works certain vital changes which affect the process of local nutrition. This is not dependent on any essential condition in the blood, either primarily or secondarily. The process of nutrition is through the morphological elements of the tissue itself, modified by the presence of the toxic agent. When the molecular life forces of a certain hystological element are controled by agents other than those normal to it, the resulting condition is in harmony with the controling influence.

The condition of tissue to which the poison attaches itself is not altogether of a pathological type. Often there are no visible changes. This is more particularly the case with the nervous tissue.

The dyscrasia syphilitica influences the nutrition of the part to which it attaches itself to such an extent as to constitute an essential feature. By its presence and activity, growth and

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repair are in harmony with its particular forces. The blood, if affected at all, is secondarily, through the local molecular nutrition; this, no doubt, by some reflecting influence, maintains all the other forces in subordination until they are relieved by a higher amount of molecular vital endowment and a more active *elimination*. I have several cases of nervous disorders that I have traced as consequent of tertiary syphilis, and successfully treated in conformity with the foregoing views.

Case I.—A young man, 29 years of age, light eyes and brown, auburn hair, fair complexion, not very robust, but enjoying average good health and bearing fatigue pretty well, had syphilis a year and a half ago, which was treated with mercurials by his medical adviser, and was kept under a slight ptyalism for three months. Secondary and tertiary symptoms made their appearance. Five months ago he came to consult me concerning a severe neurosis of the left side of his body. His head, neck, arm, side, leg and foot were in severe, agonizing pain, and there was a numbness of that side. His eye was exceedingly sensitive to light, the conjunctiva very much injected, while pressure on the globe caused dreadful distress. He described his pains as sharp, lancinating twitches, of such agonizing severity as to cause the whole side to be for a moment convulsed. His digestion was exceedingly imperfect, loathing food, and his bowels constipated. I recognized the character of the complaint at once and ordered my usual treatment, which was—

R. Pulv. Podophyllum, - - - - - ʒ i.
Pulv. Corydallis Famosa, - - - - - ʒ ss.
Pulv. Hydrastis Canad, - - - - ʒ iij.

Prepared by displacement with boiling water so as to make a pint, to which add iodide of potassium ʒ vi. mix., take of this ʒ i three times a day. This treatment, with cod liver oil, has been pursued to the present time. He has about recovered, and now takes the medicine only once a day.

Case II.—A male, 46 years of age, contracted syphilis in the army in 1863, and was treated with mercurials. Secondary

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symptoms came on six weeks after—alopecia—and was met with the biniodide of mercury by the physician. A month after he consulted me for a severe cephalalgia and weakness of the sphincters of the anus and bladder. If he did not run immediately he was sure to empty the rectum; and the bladder was not controlable at night. There was also ptosis of the right eye and numbness of the right arm. I ordered him—

R. Mag. Sulph.,	℥ i.
Pot. Bi Carb.,	℥ ij.
Chlor. Ammon.,	℥ iiss.
Water,	℥ viii.

A tablespoonful every four hours.

This was continued a week. The bowels were well cleared out though, by mild catharsis, during the week. Then I ordered him—

R. P. Podophyllum,	℥ i.
P. Colomba,	℥ ij.
Concentrated Tr. Nux Vom.,	℥ ss.
Ferri Amm. Cit.,	℥ iijss.
Ammon. Carb.,	℥ iss.
Aquæ Puræ,	℥ xviii.

to be poured boiling hot on the podophyllum and colombo, and, after infusing four hours, to be strained and pressed and the other added ℥ i three times a day. Indian hemp was given at night in full doses to control the pain. Cod liver oil in ℥ ss doses three times a day. Recovered in six months.

Case III.—A female, 30 years of age, who was ill twelve months, took syphilis from her husband. She complained of a "dead, heavy, constant pain" in the lumbar region; pain in the uterus and vagina; also, in the anus and rectum. Throat sore and tender to the touch. Small patches visible on the larynx. Speech thick, and right thigh and leg somewhat inactive; much leucorrhœa; sleeps badly; appetite capricious; often anorexia. I ordered her—

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R. Iod. Pot., - - - - - - - - ʒ i.
Ferri Amm. Cit., - - - - - - ʒ ss.
Amm. Carb., - - - - - - ʒ i.
Glycerine, - - - - - - - ʒ vi.
Strych., - - - - - - - - gr iiss.

Ac. Acetic, q s, to dissolve strych.; mix. Take ʒ iss three times a day, in water.

R. P. Podophyllum, - - - - - - ʒ i.
P. Cinchona, - - - - - - - ʒ iiss.
Aquæ Ebul., - - - - - - ʒ xviii.

Infuse for twelve hours, strain and press. From ʒ ss to ʒ i five times a day. Cod liver oil, ʒ ss three times a day. She was cured in six months.

Case IV.—A boy, aged 18 months, had congenital syphilis. His father had primary. His mother never had been inoculated. Treatment as above, but was treated eighteen months. He was cured.

Case V.—A male, 22 years of age, contracted syphilis in the army. He returned with a severe hacking cough and loss of hair. His body was surrounded by a belt six inches wide, of copper-colored eruption, and surface exceedingly tender. The cough had been treated for phthisis pulmonalis. I saw him four months after, when I recognized the syphilitic origin, and ordered treatment as above, with cod liver oil. Every week ʒ ss of sulphate of soda was administered, which appeared to afford great relief and expedite the cure, which was accomplished in six months.

Case VI.—A male 42 years of age. The whole surface of his body was quite hyperesthetic. He had syphilis two years ago, and was treated with mercury. He had severe aches in all the large joints, which had been mistaken for rheumatism. He consulted me last fall, and I recognized the syphilitic origin. I ordered—

R. Iod. Pot., - - - - - - - ʒ i.
Mur. Ammon., - - - - - - ʒ ss.
Decoct. of Cinchona, - - - - ʒ xviii.

Tablespoonful four times a day.

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R. Podophylline, - - - - - - - gr xx.
Hydrastine, - - - - - - - - 3 ij.
Ext. Gent., - - - - - - - - q s.
Make 100 Pills. One three times a day.

If they move the bowels too much, take a teaspoonful of the following—*R.* Tannin, ʒ iss; Glycerine, ʒ i.

The Concentrated Tr. of Nux Vomica is a good remedy in these cases. A decoction of Yellow Cinchona, with the infusion of Podophyllum and Hydrastis Canadis are good remedies. I prefer them made by displacement with water. Mercury is a very treacherous remedy, and often does more toward seating the poison and maintaining its existence in the system.

The preference of the syphilitic virus for white and yellow fibrous and yellow tissue should ever be borne in mind. The action of Iodide of Potassium is really on the fibrous tissues. In treating this disease in its secondary and tertiary form, I must lay great stress on the cod liver oil; but, to make it really valuable, the eliminating powers of the life forces must be attended to, and nothing equals the Root of Podophyllum Peltatum or common Mandrake. The alterative properties of this article is unequaled; hence its utility with tonics.

ON THE ETIOLOGY OF STRICTURE OF THE URETHRA.

By Henry Veale, M. D., Royal Artillery.

Amongst the several causes which have been assigned for the production of Stricture of the Urethra, it is almost universally held that gonorrhœa is the chief. This doctrine has been so long current, and has obtained such an ascendancy over our minds, that it may perhaps at first be difficult to see any reason for calling it in question. Whatever may be our conclusion, however, the meaning to be attached to the term Gonorrhœa must be defined before we proceed to examine the grounds upon which the doctrine is based.

Until between 30 and 40 years ago, gonorrhœa in the male signified any puriform discharge from the urethra; but when it was discovered that syphilitic ulcers might exist in the urethra,

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and occasion a purulent discharge, a limitation of the term became unavoidable; and thus, what most medical men now understand by it is, a specific inflammation of the mucous membrane of the urethra, attended with a purulent discharge, caused by and capable of reproducing a similar disease, but not giving rise to a solution of continuity in the affected membrane. Notwithstanding, however, that this limitation of the term has been accepted, many traces of its original vagueness of meaning still remain; consequently, we may observe that, although gonorrhœa is acknowledged to be a specific disease in its acute stage, the distinction is not always kept in view with respect to the chronic discharges from the urethra. A man is still often said to have a gonorrhœal discharge, or a gleet, when he suffers from an urethral flux of long standing, no matter how it may have originated, or by what causes it may be maintained. This source of ambiguity I shall endeavor to avoid, by employing the term gonorrhœa only in the sense which I have defined above.

What proof is there, then, that gonorrhœa is the principal cause of stricture of the urethra? In most of the works on the subject which I have had an opportunity of consulting, it seems to have been taken for granted that proof of the assertion was not required. Yet, no one, so far as I know, has ever traced a gonorrhœa, step by step, until it produced a stricture; and most authorities acknowledge that there is no perceptible connection between the intensity of the inflammation in gonorrhœa and the liability to stricture. What is most frequently asserted is, that long-standing gonorrhœas are likely to give rise to the latter condition. Now, it may be readily admitted that nearly every man affected with stricture will answer in the affirmative, if asked whether he had previously suffered from gonorrhœa; but such an admission is not sufficient for the inference that gonorrhœa is a frequent cause of the subsequent ailment. Its antecedence is not shown to be unconditional. The day invariably precedes the night; but we do not, therefore, suppose the day to cause the night. Something more, then, than the frequency of succession is required to prove the dependence of stricture upon gonorrhœa.

We should be often misguided if we trusted to the statements of the patients themselves on such matters, for most of them employ very loosely such terms as a "running," a "clap," etc.; and there are hardly two men to be found who will ascribe the same importance to disorders apparently exactly similar. What the one will regard as a merely trifling irritation, scarcely deserving a moment's notice, another will believe to be sure cause of all the ills described in certain quack advertisements.

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Nevertheless, there is a relation between the condition called a gleet and that of stricture; and it appears to me that this relation is one, not of cause and effect, but of conjoint effects—either of the same or of separate causes. The assumption that every chronic discharge succeeding an acute gonorrhœa is the true pathological sequel of this disease, would neither be warranted by theory nor established by observation. On the contrary, I think it will be found on inquiry that nearly all such chronic discharges have some other cause for their maintenance than that which originated them. Either in the part itself, or in the constitutional condition of the patient, there will almost always be discovered something, if it be sought for, which can be recognized as the condition which perpetuates the morbid action.

However much we may reason concerning a question of this nature, we must always refer to direct observation of facts if we wish to test the soundness of our conclusions. It will be understood that I do not assert that a gonorrhœa may not act as a cause of stricture, but that it frequently produces this condition is not at all confirmed by my observation. During the last eight years, with such opportunities as fall to the lot of an army medical officer, I have searched in vain for a case in which I could safely infer that a gonorrhœa, *pur et simple*, had given rise to a permanent or organic stricture. My attention was first particularly directed to the subject in 1858, by seeing a case in which the discharge from the urethra had been produced by an indurated syphilitic ulcer at the orifice. In course of time the ulcer healed, and the discharge ceased; but an induration followed soon after, about an inch further down the canal. So long as the patient lived quietly he had no urethral discharge, but his habits were very irregular, and as often as he indulged his propensities to sexual and other excesses, the discharge recurred. In 1859 and 1860 I saw him frequently again, and he then had a very tight stricture, about an inch from the orifice, and two others of less severity between this spot and the prostate, which, he informed me, had commenced exactly like the first. At this time he was almost never free from urethral discharge. He could never deviate from the paths of chastity without, as he thought, contracting a fresh gonorrhœa; and I must confess that first I also was inclined to attribute the discharge to successive infections. A more attentive consideration of the circumstances, however, convinced me that this was not a case of repeated gonorrhœa, but of urethritis, predisposed to by the presence of syphilitic deposits along the canal, and excited by over-exertion or irritation of the organ; and the dependence of the strictures upon the syphilitic disorder seemed to be sufficiently clear. I have since that time

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seen both primary and secondary syphilitic sores at the orifice of the urethra to be followed directly by stricture in the same locality, and I not long ago witnessed a case in which an induration of the submucous tissue gradually crept from the site of an old primary sore at the orifice to nearly an inch and a half down the canal, causing a very decided stricture, but, curiously enough, being exactly limited to the right side. In this instance, also, a puriform discharge frequently came on after sexual intercourse, and had been mistaken for gonorrhœa.

The narration of cases is, unfortunately, seldom sufficient proof of the correctness of an opinion. We so rarely see what we do not look for, and are so apt, on the other hand, to see exactly what we desire, that a theory having been once formed, or a doctrine espoused, we seldom fail to furnish ourselves with "facts" to support it. Such being the measure usually accorded in the world, I shall abstain from giving a detail of the cases which have satisfied me that syphilis is a more frequent cause than gonorrhœa of urethral stricture. I imagine that most surgeons in venereal hospitals have seen strictures produced by both primary and secondary syphilitic lesions, and I think it is reasonable to infer that what we see to take place at one spot, may also occur at another, where the tissues are almost exactly similar. A stricture at the orifice is, however, very easily cured, which is scarcely to be wondered at when we consider the early period at which the appropriate local treatment is then had recourse to, the greater facility and certainty with which it is applied, and the fact that, for such a case, constitutional as well as local treatment would almost always be adopted. Why it is that syphilis manifests itself more in certain parts of the body than in others it is for the present impossible to explain; but we are acquainted with the general law that parts which are not the ordinary channels for the elimination of a morbid poison are liable to be affected by it with extraordinary severity, if their functional activity be so unduly exercised as to lead to an impairment of their powers of nutrition. In conformity with this law, we may consider that sexual excesses, a gonorrhœa, or any such direct violence as the bruising of the perineum upon the pommel of a saddle, in a man affected with constitutional syphilis, will induce the peculiar mal-nutrition which is found in certain strictures.

By analogy, also, we might be led to regard syphilis as a cause of urethral stricture, for, in the cachectic state which that disease produces, it is not uncommon to find stricture of the lachrymal canaliculus, of the Eustacian tube, or even of the rectum.

From the foregoing remarks it will be seen that I not only

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regard syphilis to be a common cause of stricture of the urethra, but that I also believe it to be a frequent cause of persistent puriform discharges from that canal. Certain other cachectic conditions, however, have a similar tendency. These are principally the rheumatic, the gouty, the scrofulous, and the scorbutic; but, so far as my observation goes, their influence is much more decided in prolonging the urethral flux than in giving rise to stricture.

If the opinions which I have expressed be accepted as correct, their importance in a therapeutical point of view will not be denied. A gonorrhœa, if not aggravated by injudicious food, exercise, or general management, will nearly always terminate spontaneously in a few weeks, under the influence of rest alone. When, however, the discharge persists beyond this period, we may be sure that there is some definite cause, either local or general, acting as an impediment to recovery. By appropriate treatment, the duration of a gonorrhœa admits of being greatly abbreviated, as I shall show. Some years since I treated a considerable number of cases with full doses, either of copaiba or cubeb pepper; and, although in the majority the result was satisfactory, in other instances these drugs proved either inert or injurious. Consequently, for the last six years, I have only employed them when I have been unable to put in practice the more certain remedies, of which the application of blisters to the groin below Poupart's ligament is one. This mode of treatment was first suggested to me by my friend, Mr. Park, of the Royal Artillery, to whom belongs the merit of having systematized it, and communicated the plan to his colleagues. Dr. H. C. Miles has since made public the results which he has witnessed from it, and I may add my testimony that, for soldiers and others similarly circumstanced, it will be found a most speedy and effectual one. In private life patients will rarely submit to be treated in this way, because it necessitates the recumbent posture, and would thus interfere too much with their vocations. Nevertheless, circumstances occasionally transpire when the method may be had recourse to with advantage. I have known a man, for instance, to contract a gonorrhœa a week or two before the period appointed for his marriage, and to have been so successfully treated by the blister as to have been enabled to fulfill his engagement, if not with a clear conscience, at least with a clean bill of health. But the application of a blister to the groin is not without its dangers. I have seen it on more than one occasion to be followed by considerable sloughing of the integument, and I therefore never allow the blister to remain in contact with the skin for more than four hours whenever I now employ it. After its removal a poultice is applied, and the part is after-

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ward dressed in the ordinary way. This practice is perfectly satisfactory, and will often cure the patient in three or four days.

Under ordinary circumstances, however, no treatment is so simple and effectual as that by injection. Two grains of sulphate of zinc to the ounce of water is one of the best injections, and it should be used from three to six times in twenty-four hours, or oftener, if the symptoms are very severe. The injections should be begun at the earliest possible period, and the recumbent posture maintained as much as circumstances will allow. In a series of observations I found the average duration of the cases under this treatment to be nine days. The results which I have seen from blistering the penis itself, and injecting very strong solutions of nitrate of silver, etc., are such that I should not consider it wise, under any circumstances, to repeat either practice; and I may also remark, *en passant*, that, since I have relinquished the use of cubebs and copaiba, I have never met with a case of gonorrhœal rheumatism, as it is called.

Whenever a gonorrhœa is prolonged beyond the ordinary period, the condition of the urethra ought to be carefully examined along its whole length, both by external manipulation and by the passage of a bougie. The slightest nodule of induration, or the least diminution of the elasticity of the canal, should receive the most attentive consideration, for it is chiefly by these indications that we can infer the tendency to the formation of stricture. Should a syphilitic diathesis co-exist, the nature of the case will be tolerably clear; but it will be a matter of difficulty oftentimes to determine the right method of treatment. Mercury and iodide of potassium, as is well known, irritate the urethra so much that, for a time at least, their internal use would aggravate the symptoms; but mercurial inunction, or the vapor bath, do not act so prejudicially, and these appear to me to be the best remedies to employ when the constitutional condition is such as to offer no impediment to their use. The efficacy of purely mechanical means for the cure of stricture has, I think, been too much insisted on during the present century. For affording immediate and temporary relief, I am willing to concede to them all that can be demanded, but I am convinced that in strictures caused by, or complicated with, a syphilitic deposit, mere dilatation is not sufficient. It will not restore the canal to its original elasticity, and we ought not to consider the cure to be complete until this has been effected.—*Edinburgh Medical Journal.*

A New Food.—Mr. Hullett calls attention to the value of Chinese sugar grass (Sorghum tartaricum) as a valuable addition to our cereal crops. It bears six or eight times the quantity per acre that wheat does, makes capital bread, whilst the leaves and shoots are good for cattle.

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PROCEEDINGS OF THE EIGHTEENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN THE CITY OF CINCINNATI, MAY 7th, 1867.

FIRST DAY'S PROCEEDINGS.

The Association met Tuesday, May 7th, at 11 A. M., at Hopkin's Hall, and was called to order by the President, Dr. Henry F. Askew, after which prayer was offered up by Rev. Dr. Storrs, of Cincinnati.

The Committee of Arrangements, through their chairman, Dr. John A. Murphy, welcomed the Association in the following brief and appropriate remarks:

Mr. President and Gentlemen of the Association:

It is my pleasant duty to greet you on this occasion, and to give you a cordial welcome to this city. I welcome you also on behalf of the profession, and of the citizens at large.

Seventeen years ago this Association honored us with a meeting. Now, as then, we are happy in greeting representatives from all parts of our beloved country.

It is, then, sir, with feelings of no ordinary pleasure, that I welcome this Association—American by name, national and catholic in spirit—once more to the hospitalities of our city. Its history is bright with the names and labors of the great and good in all parts of our country.

It has harmonized the profession, elevated its tone, stimulated a desire for a higher standard of medical education, and, above all, has drawn a line as of fire between the scientific physician and the empyric, by adopting the Code of Ethics.

Its power for good is hardly to be estimated. Its yearly transactions have received high commendation. No man in the profession can be indifferent to it. Much remains to be done to make its labors still more valuable.

Without any power from the State or the National Government, to execute its mandates, it must, for the future as in the past, rely on the union, enthusiasm and scientific labors of its members.

Having the highest confidence in the capacity of the Association for usefulness, and trusting that its labors may be still more conducive to the advancement of the science and improvement of the art, I bid you God speed in your efforts, and again most heartily welcome you to our city and our homes, as distinguished and honored guests.

Dr. Murphy then announced the places of meeting of the different sections and committees of the Association.

Dr. William B. Atkinson, permanent Secretary of the Association, then read the list of accredited members and called the

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roll, which was responded to by some three hundred members present.

Dr. Askew, the President, then delivered his inaugural address, an hour in length, but pertinent and important as it was comprehensive. He first referred to the origin of the Association, and sketched its usefulness in its history for the past eighteen years, showing how it had elevated and rendered more efficient the medical profession in the United States. The membership included about three thousand practitioners, scattered all over the country, through whose influence the power of the Association was disseminated and exerted among the profession at large. The printing of the reports and papers submitted to the Association, in the volume of annual published proceedings, was instrumental in spreading a knowledge of the facts discovered and experimented upon by the more scientific.

He called attention to the fact that never more than 1100 of these volumes had been distributed, and of late years only 500 volumes, whereas they should be in the hands of every intelligent and progressive physician.

He treated briefly of specialties in medicine. He admitted that the science of medicine, in connection with the endless varied forms of disease, was too vast to be comprehended fully and practiced by any one mind, and therefore devotion to any one or a few branches of the art of curing disease was not to be condemned; but he suggested that, inasmuch as the special practitioner was likely to be unfamiliar with and unskilled in regard to the general symptoms or general causes of special diseases, consultations between the special and general practitioners would be conducive of good results. Neither should entirely ignore the other.

In regard to empyricism, the President said the profession was in some degree responsible for its existence. It had formerly frowned upon all dissemination of medical knowledge among the people, leaving them the prey to pretenders. The teaching of physiology, botany, etc., in our schools, was a step in the right direction, which he hoped would be continued in other departments of medical knowledge.

The subject of a better grading and more thorough instruction in medical colleges was urged upon the consideration of the Association.

The practice of using opium as a stimulant, by respectable people, who condemn the use of intoxicating drinks, was adverted to, and its destructiveness of health and life as considerations why physicians should use their influence to check the evil; that influence might be brought to bear upon our Legislatures, to secure enactments against the sale of the drug, except on prescriptions.

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The reports of the Standing Committees were next called for in due order.

The Committee on Rank of Medical Men in the Army and Navy of the United States, reported the following:

Dr. Pinkney read this report, and as he sustains the rank of Commodore in the navy, and most vehemently protests against the wrongs of the medical profession as practiced in the United States Navy, his views must carry weight. His paper could not be abbreviated, but the following will serve to illustrate its character:

"Our service is overgrown with usages which sprung up in the earlier and ruder ages of naval life, and still cling to it with a power and tenacity which almost defy modern enlightenment, progress and even law. It is probable that the National authorities, who organized the existing rank of medical officers, intended to confer a more substantial fact than the usages of ship-board life have permitted. Among the usages of the service, is that which limits an officer's rights and comforts to the apartments in which he messes, even though his rank actually entitles him to higher privileges and greater comforts than belong to those of an inferior rank, who make up the majority of the inmates of that apartment. The steerage is the most humble of those apartments, and is the dwelling place of the very young, or those of no responsibility. The ward-room gathers in it most of the commissioned, and some warrant officers, and was originally occupied by none of higher rank than Lieutenant. All its usages and government are still conformed to the scale of that grade.

"Now, make a medical officer in name an Admiral, and leave him to be ward-room officer, and the title becomes ridiculous. It is sunk below the usages and restrictions originally designed for those of junior years and of inferior rank.

"There is only one mess which is superior to these restrictions, and that is the mess or messes of the commanding officers and their associates, who may range in rank from a Lieutenant Commander to an Admiral. Sometimes there are one, sometimes two of these messes. This is very properly left to the will of the Commander-in-chief, who may choose that he and his Captains may have one or separate establishments. The Assistant Surgeon enters the service with the rank of Master. That this title may not be misunderstood, it may be necessary to explain that it is the lowest rank in the ward-room, for the incumbent is, in modern times, generally a graduate of the Naval Academy, awaiting his promotion to Lieutenancy. Like the Master, the Assistant Surgeon at once becomes a member of the ward-room mess, and unless the number of partitioned-off sleeping-berths contained in the ward-room are occupied by

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his seniors, he may have the good fortune to occupy one of those that are dimly lighted by an air-post, six inches in diameter. This space is so restricted, and the separation from the common apartment is so slight, that words in an ordinary voice in another become common property."

After further presenting the discriminations of medical men, in regard to ship-board accomodations, the Doctor said:

"The general law is that no officer shares in prize money unless his name be borne upon the books of the vessel making the captures; but the Admiral or Commander-in-chief has a percentage on all prizes made. The Fleet Surgeon, as a member of the Commander-in-chief's staff, must be with him in the flag ship, and as a rule, at the post of the greatest risk, responsibility and hazard, consequently he is not likely to have his name borne upon the books of the subordinate vessels making captures, and yet no share of prize money is allowed him."

The report suggests the following as the remedy for these evils:

"1. After they have reached the rank of Commander, or are filling the position of Fleet Surgeon, let them be by right, as they often have been by courtesy, members of the cabin mess. If the mess of the Commander-in-chief be too exalted a social position for the members of your profession who are filling the important position of Fleet Surgeon, then let them be members by right of the mess of the Commander of the ship and the Fleet Captain.

"2. An equitable arrangement of prize money, most important in principle, your Committee hope to see effected. It will, however, require future legislation."

In European countries, the Doctor said, more liberal regulations prevail in regard to naval surgeons than in democratic America.

"The late Admiral Foote, so justly distinguished for his large-minded liberality, advocated the highest rank for naval medical officers. An Admiral, among the most distinguished in the service, has authorized to be officially said that he thought the Fleet Surgeon should in our service, as in the French, be a member of the Commander-in-chief's staff and family. We regard it as opposed to the public interests of the service, which can never be sacrificed with gross indignity without detriment."

Dr. Pinckney offered, in conclusion, a resolution that a committee of five be appointed by the Chair to present the subject to the President of the United States and to the Secretary of the Navy. Carried unanimously.

On motion, it was resolved to memorialize Congress to enact a law giving a proper share of prize money to medical naval officers.

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The Secretary announced several papers, which were referred to sections, and will come up in regular order hereafter.

Report of Committee of Publication was read.

The Association refused to abolish the payment of money for prize essays, and substitute a certificate and a hundred printed copies of the essay to the essayist.

On motion, it was resolved that the delegates from the different States should meet on Wednesday and resolve among themselves their candidates on the new committee, and report the same to the Secretary.

Notice was then given that a grand banquet was to take place in honor of the Association, at Melodeon Hall, in the evening.

The Association then adjourned to meet the following morn- at 9 A. M.

SECOND DAY'S PROCEEDINGS.

The Association met pursuant to adjournment, Wednesday morning, at 9 A. M., and resumed business.

The minutes of yesterday's session were read and approved.

On motion, the following gentlemen were proposed, and voted members of the Association by invitation:

Drs. J. Taylor Bradford, Augusta, Kentucky; John P. Phister, Maysville, Kentucky; W. L. Atkins, George H. Whitney, A. B. Duke, M. L. Forsyth, Paul Rankin, Kentucky; M. W. Junkiss, Galen Hart, E. P. Harrison, Ohio; D. R. Greenley, Meadsville, Pennsylvania; Fred. Wolf, Concord, Maryland; E. B. Harrison, Napoleon, Ohio; B. F. Hart, Marietta, Ohio; John Dillard, Lexington, Kentucky; A. J. Larey, Mt. Pleasant, Kansas; S. S. Gray, A. S. Ashton, Piqua, Ohio; John A. Warder, J. D. Stoebler, Cincinnati; Dr. Marsden, of Quebec and Dr. Maley, of Cincinnati.

Delegates from the several States then presented the following-named as Committee on Nominations for Officers:

Vermont, J. N. Stiles; Massachusetts, H. R. Storer; Rhode Island, O. Bullock; Connecticut, B. H. Catlin; New York, E. Elliott; New Jersey, Samuel S. Clark; Pennsylvania, J. L. Atlee; Delaware, F. H. Askew; Maryland, J. J. Cockrill; West Virginia, J. C. Hupp; Ohio, J. P. McIlvaine; Kentucky, D. W. Yandell; Indiana, J. S. Bobbs; Illinois, H. A. Johnson; Michigan, A. B. Palmer; Iowa, J. C. Blackburn; Missouri, R. F. Shumard; Texas, Dr. Hurd; District of Columbia, J. Elliott; United States Navy, N. Pinckney; United States Army, J. J. Underwood; Wisconsin, N. Dalton; Kansas, John Parsons; California, T. M. Logan; Tennessee, U. A. Atchison.

The Secretary read a letter from Prof. Alden March, donating to the Association photographs of all the Presidents of the

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Association, a copy of which he transmitted to the proper officer for deposit in the archives. He also said he would add to the collection in the future. The donation was accepted.

The report of the Committee to Foreign Medical Associations was then read by Dr. C. C. Cox. He related his recollection of the Bristol Medical Association, at Chester, England, in 1866. The report was referred to the Committee on Publication.

The Chair then appointed the following delegates to the Foreign Medical Association for the present year: B. Fordyce Barker, M. D., New York: John E. Tyler, M. D., Massachusetts; Thos. C. Brinsmade, M. D., Troy, New York.

The Chair announced the Committee on Medical Rank in the United States Navy as follows: N. S. Davis, M. D., Illinois; J. M. Toner, M. D., District of Columbia; S. D. Gross, M. D., Pennsylvania; J. J. Cockerill, M. D., Maryland; H. F. Askew, M. D., Delaware.

Dr. Gross read his report on medical education. The report is lengthy, and is an embodiment of the action of the Medical College Convention, as already published.

Dr. Davis read a summary of the proceedings of the Convention of Medical Teachers for the information of the Association. He stated that the discussions were most thoroughly conducted, and were characterized by the best of feelings. He read at length the report of the Business Committee.

Dr. Stille then presented the report of the action of the Convention of Medical Teachers, which was received, and on motion, referred to the Committee on Publication.

Dr. Sayre, of New York, offered the following:

"*Resolved*, That this Association most cordially approve of the whole action of the Convention of the Delegates from the Medical Colleges, assembled in Cincinnati, May 3, 1867, and urge its practical adoption by all the Medical Colleges in our country."

After a brief debate, in which Drs. Post, Davis and Lee participated, the motion was carried.

The Committee on Prize Essays reported the reception of eight essays, and the selection of two. These were:

For the First Prize—"On the cause of intermittent and remittent fevers,"—the motto of which was, "*Fortis est veritas.*"

For the Second Prize—"On the treatment of certain abnormities of the uterus,"—the motto being, "Empiricism in medicine and surgery is fast giving way to the rationalism of true diagnosis."

The envelopes inclosing the names of the successful competitors were then opened, and the following announcements made:

First Prize—To J. R. Black, M. D., of Newark, Ohio.

Second Prize—To Montrose A. Pallen, M. D., of Saint Louis, Missouri.

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These prizes are annually awarded, and consist of $100 each, their merit being indicated by the order of their award.

Report referred to Committee on Publication.

Dr. Atkinson called up the resolution of abolishing the payment of prizes in future.

It may be stated here that the report of the Treasurer, read yesterday, showed the Association to be in debt $196, and that from year to year this condition is the same.

Dr. Davis objected to the resolution which virtually repudiated the payment of future prizes. As the treasury would soon again be full, he would call the attention of the Association to the fourth section of the by-laws. He considered that the transactions called for more original papers at the expense of bulk. The matter should be better, even if the volume be smaller.

Dr. Bibbins, of New York, called attention to a parliamentary point. He favored a more careful consideration of the subject.

Dr. Bronson, of Massachusetts, was opposed to prospective action.

Dr. Atkinson called attention to the fact that the Committee were last year obliged to hold themselves personally responsible for the debt. He said that the present funds of the Treasury were even now insufficient to print the matter already in their possession.

Dr. Bronson thought that the fault lay with the different Sections, who did not exercise the requisite discrimination.

Dr. Bibbins called the attention of the Chair to the fact that the resolution was in conflict with the by-laws.

Dr. Toner considered the assessments would meet all the necessities of the case. He offered the following:

"*Resolved*, That all members yearly pay five dollars, and that the names of those failing to pay, at the end of three years, be designated in the catalogue by a star or cross."

Dr. Sayre moved as an amendment that the proposed action of the Association be published in the various medical journals.

After a spirited debate, in which several delegates joined, a motion of Dr. Davis to lay the original motion on the table finally prevailed.

Dr. Robbins offered the following:

"*Resolved*, That hereafter the Committee of Arrangements be directed to have the ordinances governing the Sections printed on slips and distributed at the several places where the Sections meet." Carried.

The following papers were read and disposed of:

Observations on Diseases of the Throat, as seen in the Military Service from 1861 to 1865. By Professor M. K. Taylor, M. D. Referred to section on practical medicine.

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A Novel Cure of Lithotomy. By Dr. E. Whinney, of Iowa. Referred to section on surgery.

Ligature of the Subclavian Artery. By Willard Parker, of New York. Referred to section on surgery.

The Secretary read a communication offering amendments to the constitution, which was laid over for one year, as provided for by the constitution.

A paper was read by Dr. B. Howard, of New York—before the Surgical section of the Academy—entitled "Ligation with depletion of varicose veins of the leg with case."

Dr. Cox presented advance proof-sheets of "Provisional Nomenclature of Disease," which was published in London. Referred to Section on Practical Medicine. Also another "On Compulsory Vaccination," by Dr. A. N. Bell, of Brooklyn, New York, was presented by deputy, and, on motion, referred to Committee on Hygiene.

Dr. Hammer, of Missouri, offered certain resolutions bearing upon certain irregularities in the profession, which was referred to Committee on Medical Education.

Dr. Gilbert, of New York, exhibited an instrument for the protection of periosteum in excisions, &c. Referred to Section on Surgery.

Dr. Post read the report of the Committee on Medical Literature, in which he gave certain Bibliographical items.

Dr. Sayre protested against certain portions of the report as being too highly laudatory of the Board of Health of New York, and as containing matter foreign to the scope of such report. He also made some remarks upon cholera and quarantine, and claimed that there were few if any cases of that disease to combat, and that these same had been introduced by breakages of the quarantine.

Dr. Davis supported the spirit of the Committee's report, and moved that it take the usual course of reference to the Committee on Publications, which was adopted.

Dr. Hibbard offered the following:

"*Resolved*, That the habit of using unofficinal preparations of medicine by the physicians, except where there is no officinal preparation that will answer the purpose as well, is unscientific and imprudent, tending to demoralize the therapeutist and to encourage irregular pharmaceutists and nostrum makers, and should be abandoned.

"*Resolved*, That the profession should not patronize druggists who are engaged in the manufacture of nostrums."

On motion, tabled.

The Association then adjourned to meet the following morning, at 9 A. M.

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THIRD DAY'S PROCEEDINGS.

The Convention met, pursuant to adjournment, Thursday morning, at 9 A. M., and resumed business.

The minutes of yesterday's session were read and approved.

Dr. D. H. Storer arose to a question of privilege, namely, the honor of the Association. It was in debt, and its first duty was to take measures to relieve its executive officers from their embarrassments. He moved that every member be assessed a tax of $2 to raise the necessary funds.

After some discussion, the following resolution was offered by Dr. Davis, and adopted by a vote:

Resolved, That Dr. D. H. Storer be requested to draw up a suitable paper and leave it at some place accessible to the members; and that all members present be requested to subscribe such amount as they feel disposed, for the purpose of liquidating the indebtedness of the Association and replenishing its treasury.

Dr. Atlee, of Philadelphia, offered the following preamble and resolutions:

WHEREAS, The subject of female medical education is exciting attention, and regularly educated female physicians have established themselves as practitioners of medicine; and,

WHEREAS, Female Medical Colleges, embracing all branches taught in other Colleges, and all their conditions for graduation, exist in the United States for the separate education of females; and,

WHEREAS, It is important that the standard of education, and the observance of the code of medical rules should be fostered and maintained by this Association; therefore, be it

Resolved, That the American Medical Association recognises well educated female physicians by the same laws that govern its own members.

Dr. Bowditch moved to lay the whole subject on the table. Carried.

Dr. Clement A. Walker, of Boston, Massachusetts, then read a lengthy paper from Dr. Ray, of the Providence (Rhode Island) Insane Asylum, treating of insanity, its different causes, various phases, modes of treatment, cures effected, &c.

Dr. H. R. Storer, of Massachusetts, moved that Dr. Ray's able and interesting report be accepted, and referred to the Committee on Publication, which motion was carried by a unanimous vote.

The Committee on nomination of officers and place of meeting reported as follows:

Place of meeting—New Orleans.

President—Samuel D. Gross, of Pennsylvania.

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Vice-Presidents—A. C. Post, of New York; John H. Alter, of Pennsylvania; D. W. Yandell, of Kentucky, and H. R. Storer, of Massachusetts.

Permanent Secretary—Wm. B. Atkinson, of Pennsylvania.

Assistant Secretary—J. G. Richardson, of New Orleans.

Treasurer—Caspar Wistar, of Pennsylvania.

On motion of Dr. Davis, of Illinois, that portion of the report naming the place of meeting and officers resident there was laid on the table. The rest of the report was then adopted

Dr. Davis then remarked that the crisis had arrived, which he had long anticipated, when the matter of eating and drinking and entertaining the Association had come to involve such an expense that no invitation had been extended in advance, by resident members of the profession, for the Association to meet in any city, and the committee had reported New Orleans without an invitation from any one there. While there was no city in which he would like better to meet on personal accounts, and as a manifestation of reunion with the South, he felt that it would not be right to impose a meeting of the Association on that city. It was embarrassed in every relation of life, like all other places in that direction. It was impoverished, and, though they would no doubt receive us with cordial and open hands, it would be wrong to tax them in that way. They could not vie with the liberality and extravagance of Cincinnati; or, if they did, it would be at a sacrifice we would not admit of. He would give them another year to recover, and an opportunity to invite us. He therefore offered the following:

"*Resolved*, That the next annual meeting of the American Medical Association shall be held in the City of Washington, on the first Tuesday in May, 1868, and every second year thereafter, until otherwise ordered by the Association."

"*Resolved*, That, whenever the Association shall meet in the City of Washington, as directed in the above resolution, the Committee of Arrangements be strictly forbidden either to provide themselves, or accept provision by others, of any entertainment or excursion whatever."

After considerable discussion, participated in by Drs. Yandell, Griswold, Sayre and others, the subject was laid on the table until to-morrow.

Notice was given of a steamboat excursion, gotten up in honor of the Association, and the members were invited to participate in the same.

On motion, the Association adjourned, to meet the following morning, at 9 A. M.

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FOURTH DAY'S PROCEEDINGS.

The Association met pursuant to adjournment, Friday morning, at 9 A. M., and resumed business.

The minutes of yesterday's session were read and approved.

The following were, on motion, elected additional delegates to the International Medical Congress, to be held in Paris next August:

Drs. Wilson Jewell, of Pennsylvania; Ninian Pinkney, U. S. N.; John Hart, of New York, and Charles A. Pope, of Missouri.

Dr. Hibbard, of Illinois, then presented the following, which was carried:

WHEREAS, It has been officially announced that, for the last two years, the annual volume of Transactions of this Association could be published only by the members of the Publication Committee becoming individually responsible for the cost of the same above the amount of funds in the treasury; and,

WHEREAS, Such a condition of affairs is impolitic for the Association and unjust for the Committee; therefore,

Resolved, That the Association does not expect the Committee on Publication to issue the volume of Transactions for the present year, unless it can be done with the funds and the credit of the Association.

Dr. Hildreth submitted a resolution.

"That a Committee on Ophthalmology be appointed, to report at next session."

Carried.

Drs. Joseph Hildreth, of Chicago, Illinois; Henry D. Noyes and Cornelius R. Agnew, of New York, were appointed said Committee.

Dr. Davis' resolution, regarding the next place of meeting, &c., was then ordered from the table.

After a lively debate, during which several amendments to the original resolution were entertained, the motion finally prevailed in the following form:

Resolved, That the next annual meeting of the American Medical Association shall be held in the City of Washington, on the first Tuesday in May, 1868, and every second year thereafter, until otherwise ordered by the Association.

Resolved, That, whenever the Association shall meet in the City of Washington, or elsewhere, as directed in the above resolution, the Committee of Arrangements be strictly forbidden either to provide themselves, or accept provision by others, of any entertainment or excursion whatever, which will conflict with the regular business of the Body or its Sections.

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Dr. Atkinson read a communication from Dr. Henry S. Lyster, Secretary of the Wayne County (Mich.) Medical Society, requesting that some action be taken by the American Medical Association regarding the "Introduction of the Cinchona Tree in the United States." For the sake of giving form to the discussion, he presented the subjoined:

Resolved, That a committee of three be appointed by the Chair, whose duty shall be to memorialize Congress relative to the cultivation of the Cinchona Tree.

Carried.

Drs. J. M. Toner and F. Howard, of Washington, D. C., and C. A. Lee, of Poughkeepsie, New York, were appointed said committee.

Dr. Davis, in view of the fact that the hour of adjournment was rapidly approaching, offered a resolution which he thought would meet all objections.

Resolved, That such papers and reports as the several Sections have not been able to act upon be referred to a Special Committee of *three*, to examine and act upon in all respects as is required in the proper Sections.

Carried.

The committee appointed consisted of Drs. N. S. Davis, D. H. Storer and C. A. Lee.

Dr. Atkinson read by title "Synopsis of an Essay on the Contagion, Infection, Portability and Communicability of the Asiatic Cholera in relation to Quarantine. With a brief history of its origin and course in Canada from 1862. By Wm. Marsden, M. D."

Dr. Marsden made a few remarks in explanation of the objects, etc., of the paper.

Dr. Sayre moved to refer the paper to the Committee of Publication. Carried.

The following was offered by Dr. Cox, of Maryland:

Resolved, That a committee of five be appointed by the Chair to take into consideration such amendments or alterations in the plan of the organization of this Association, and to remedy defects, if any, and increase its efficiency, and to report to the meeting in 1868.

Adopted

Drs. C. C. Cox, J. M. Toner, W. B. Atkinson, J. J. Woodward and John Shrady were appointed in accordance with the above.

Dr. Charles A. Lee, of New York, submitted the following resolutions, bearing upon the subject of Cholera, which were adopted as the sense of the Convention:

WHEREAS, It was declared by a vote of Congress, at its last session, that it is not within the Constitutional powers of the

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General Government to establish a general and uniform system of quarantine for the different ports of the United States; and,

WHEREAS, The Cholera infection has been introduced into the United States, and did, doubtless, manifest itself in many of the cities, towns and villages of our country during the present season; and,

WHEREAS, The experience of the city of New York and other places, both at home and abroad, has demonstrated the efficacy of certain chemical disinfectants, especially *carbolic acid* and the *sulphate of iron*, in destroying or preventing the spread of cholera *virus*, it is hereby as urgently recommended by this Association, that the attention of physicians of the United States be chiefly and constantly directed to the prompt and free use of such disinfectants wherever the cholera poison may show itself; therefore,

Resolved, That, as the experience of Europe and the United States has satisfactorily shown that the cholera poison can not be controlled or kept in check except where the *cordons sanitaires* are absolutely prohibitory of all intercourse, as was the case in the entire Island of Sicily and the entire coasts and frontier of Greece, during the recent cholera epidemic; and,

WHEREAS, There is no good reason to believe that the people of the United States would not submit to the enforcement of such prohibitory measures and non-intercourse as is necessary to hold the cholera poison in check, especially after its introduction into the country, it is hereby recommended to all municipal bodies and Boards of health to pay special attention to requisite sanitary measures, such as the cleansing of streets, lanes and alleys; the supply of pure drinking water to the inhabitants; the ample provision of chemical disinfectants, and their prompt employment in necessary places; the separation of the sick from the healthy in the same dwelling; the inspection and regulation of tenement houses; the provision of nurses, hospitals and competent physicians for the sick poor who may be attacked; provision for early burial of the dead; the separation of the corpses from the living, and the prohibition of the custom of waking the dead, and all other measures which have been found necessary to control the progress of the disease: therefore,

Resolved, That experience proves that the publication of the facts connected with the existence and progress of cholera in any place, instead of disturbing the popular mind, while it reveals the exact extent of the danger, robs it of the hold of alarm and fear, with which the imagination surrounds indefinite pestilence, walking abroad by noon-day.

Dr. M. A. Pallen presented the subjoined:

WHEREAS, It was the intention of the resolution originally

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introduced, creating the office of Permanent Secretary, to pay said officer a certain sum annually as a salary for services as such; and,

WHEREAS, Dr. Wm. B. Atkinson, our present efficient and urbane Secretary, has never received any money whatsoever in payment of said services; therefore, be it

Resolved, That the Permanent Secretary hereafter, and from this date, be authorized to draw a warrant upon the Treasurer for the expenses incurred in his attending each session of the Association, and that the Treasurer is hereby instructed to pay the same.

Unanimously adopted.

Dr. Atlee moved that the thanks of the Association be tendered to the Permanent Secretary for past services. Carried.

Dr. Toner proposed the following, which includes an article of the Constitution with the amendments added: The sum of five dollars shall be assessed annually upon each delegate to the Sessions of the Association, as well as upon each of its permanent members, whether attending or not, for the purpose of raising a fund to defray the *necessary* expenses of the Association, and for printing the Transactions. The payment of this assessment shall be required of the delegates and members in attendance upon the Sessions of the Association previously to their taking seats and participating in the business of the session. Permanent members not attending, shall forward their yearly dues to the Treasurer, and thereby shall be entitled to receive a copy of the printed Transactions, the same as delegates. Referred, after an animated debate, to Committee on Revision of Constitution and By-Laws.

Dr. Atlee then pressed his resolutions on the subject of Female Medical Education. A motion to take them from the table was carried by a vote of 56 to 52.

Dr. Pallen, of Missouri, was opposed to the discussion of the subject. Women were not by nature fitted for the practice of medicine. It had been tried in Europe, and had proved an utter failure. Ladies possessed of any delicacy could not acquire the proper amount of knowledge. Imagine a young lady, with gigantic chignon and garbed in silks, entering the charnel house, and bending over a corpse, microscope in hand, searching for cancer cells, etc., etc.

Dr. Davis thought the discussion of this subject, at this time, would only furnish newspaper gossips with a subject, and could do no possible good. He therefore moved to refer the whole subject to the Committee on Medical Ethics.

Dr. Bowditch, of Mass., was opposed to this way of disposing of such an important matter. He had moved yesterday to lay the resolutions on the table, simply because he thought the

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Convention was not then prepared to act upon them. The question had nothing to do with the laws of nature or the manner in which ladies were to acquire the proper amount of knowledge. The question was simply whether or not they should be recognized when they *had* acquired that knowledge, as many of them undoubtedly had.

The Doctor mentioned several instances in which the practice of medicine by lady physicians had been attended with great success.

Dr. Davis' motion to refer to Committee on Medical Ethics was carried by a large majority.

Dr. Hibbard moved that Dr. Theophilus Parvin, of Indiana, be appointed to render a special report on the Surgical Diseases of Women, at the next annual meeting. Adopted.

A vote of thanks was tendered to Mr. F. Hopkins, for free use of his Hall.

Dr. C. A. Lee offered the following:

Resolved, That providing for the poor chronic insane in the jails and almshouses of our country, as at present practised in nearly all the States of the Union, is a gross violation of the laws of humanity, and contrary to the Divine injunction of "doing to others as we would be done by."

Resolved, That where the regular hospitals for the insane of a State are insufficient to accommodate both acute and chronic cases that are sent to them, this Association would strongly recommend the procurement of a suitable amount of land in the vicinity, and the erection of convenient, well-planned, and well-ventilated, but comparatively inexpensive buildings, in connection with and under the same general supervision as the hospitals themselves, where those who are able to labor, and would be benefited by light and regulated employment, may be suitably accommodated and properly cared for.

Resolved, That the example of Massachusetts in establishing asylums for the accommodation and humane treatment of the chronic insane, is worthy of all praise and imitation, and in the opinion of this Association, such institutions, if rightly inaugurated and judiciously carried on, will be a benefit to the State in an economical point of view, will raise the character of the State Hospitals, and will greatly subserve the interests of the insane generally.

Resolved, That as the present insane hospitals are capable of accommodating but a small proportion of the 40,000 insane of the United States, and as almshouse and jail provision is not adapted to their proper care and treatment, this Association would recommend to the proper State authorities, to make such further provision in the direction above indicated as may tend to the amelioration of their condition, if not the restoration of their rational and moral faculties.

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Dr. Bibbins moved to refer to a Special Committee of five, to report to the next annual meeting. Carried.

Dr. C. A. Lee, New York; Dr. Guntry, Ohio; Dr. John Fonerdin; Dr. Walker, Mass.; Dr. Chipley, Ky., were appointed said Committee.

Dr. Davis moved that the Committee charged with procuring suitable accommodations for the Association meetings in the Smithsonian Institution, in Washington, D. C., be continued. Carried.

Dr. Alden March, of New York, offered the following:

Resolved, That the thanks of the Association are due, and are hereby tendered to the President and retiring officers for the ability, impartiality, and courtesy manifested in the discharge of their arduous duties.

Carried.

Dr. Cox moved that surplus copies of the Transactions of the Association not yet out of print, be sent to the secretaries of similar organizations in exchange for the volumes published by their own bodies. Carried.

Dr. Hughes presented the following:

Resolved, That those members of the Association who have contributed to the amount of five dollars to the publishing of future Transactions, shall be entitled to any back volume of the Transactions to the amount of same, as they may want.

Carried.

After the passage of several votes of thanks the proceedings were read and adopted, after which the Association adjourned *sine die*.

Old Folks.—The entire number of persons who, according to the census, have attained the great age of 100 years and upward, is probably larger than most of our readers would guess. It is just 1,200. Of these there are, white 440, black 688, mulatto 56, Indians 26. Women attain high longevity in greater numbers than men, and black people more than white. There are white males 184, females 256, black males 295, females 393. The proportions are about the same in the different years above a hundred as in the aggregate. The oldest persons are a white woman in South Carolina, and an Indian woman in California, aged 140 years. The oldest blacks, two males and three females, are 130 years. From these advanced years down to 100, there are persons in every successive year. At 110 there are 29 white and 119 black; at 120 there are 2 white and 81 black. In proportion to numbers, twelve times as many blacks as whites exceed a hundred years of age. By the best calculations made, it is ascertained that the average duration of human life is greater in the United States than in any other nation.

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THE MEDICAL REPORTER.

ST. LOUIS, JUNE 1, 1867.

REVIEWS.

ON THE ACTION OF MEDICINES IN THE SYSTEM. By F. W. HEADLAND, M. D., B. A., F. L. S., Fellow of the Royal College of Physicians, etc. etc. Fifth American from the Fourth London Edition, Revised and Enlarged. Philadelphia: Lindsay & Blakiston. 1867.

Dr. Headland's admirable work has now been so long before the public, and has received so strong an approbation of its doctrines by the profession, that the mere announcement of another edition will give rise to renewed enthusiasm in its regard. We believe that but few Medical productions have reached so rapidly the standard of authority as this. Founded entirely upon observations and discoveries of himself and others, and not upon mere hypotheses, and these facts often of great importance "and representing the labors of therapeutists of all nations during the last seventy years," we are prepared to accept at once the conclusions of the author, and embrace them as something real among the innumerable uncertainties of the wide domain of Therapeutics. There can be no better evidence of the rapid advance of medicine than this work and its views in comparison with the opinions of very prominent men of the last century, such for instance, as the Mechanical and Chemical principles of the action of medicines.

The present edition has been enlarged, though not to an inconvenient extent, by the addition of new matter, or the confirmation of old, as the discovery of Quinine, or an analogous substance, natural to the blood. The discovery of this substance is narrated in full, by Dr. Bence Jones, and adds interest to the very valuable remarks on Tonics by the author himself. Throughout the whole work we find constant additions from all that is of any value, coming up in the last few years; and though well acquainted with the author's views from his first edition, yet we rise from an examination of the present issue with that satisfaction which results from the obtaining of new knowledge.

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WATSON ABRIDGED: A SYNOPSIS OF THE LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC. By THOMAS WATSON, M. D, Fellow of the Royal College of Physicians, etc. etc. (abridged from the last English edition), with a concise but complete account of the Properties, Uses, &c. (from the U. S. D.), of all the medicines mentioned in these lectures, and with other valuable additions. By J. J. MEYLOR, A. M., M. D. Philadelphia: Published by the author. 1867.

We are indebted to the author for a copy of this very neat abridgment of Dr. Watson's Lectures. The object of the work has been to place conveniently before the young practitioner, and particularly the medical student, the sum and substance of Watson's great production. This has been successfully done, for in point of size and the accuracy of the synopsis, we find everything desirable, everything really necessary, though we miss the beauty of the original in its rounded form and graceful outline. The author however deserves credit for the labor he has bestowed upon his work, and he has given his soul to the work before him. If used solely as a book of reference, as a vade mecum, it will be of great use to the student in his studies; but it must not be otherwise used. We object to making this or kindred works, text books for the lecture term, nor do we suppose that there was any intention on the part of our author so to do; but we would warn the young man from relying too much on their aid, for they beget habits of indolence, which in after life can not be shaken off. We rather believe that the student should make a synopsis of his readings or his lectures for himself, as it strengthens attention and invites thought; the less labor, the less reward. But probably in the numerous hand-books of medicine now published we see the results only of our system of teaching, everything crowded into as narrow a space as possible. But we do not the less praise the production of our author, for he has labored hard for what seems to him a great good. We recommend such works to the older practitioner, for he alone has not the time to review his old studies, or read all that is new in medicine; he alone can profit by such an abridgment as we have before us, and which we shall take much delight in perusing.

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INHALATIONS IN THE TREATMENT OF DISEASES OF THE RESPIRATORY PASSAGES, PARTICULARLY AS EFFECTED BY THE USE OF ATOMIZED FLUIDS. By J. M. Da Costa, M. D., Physician to the Pennsylvania Hospital, Fellow of the College of Physicians, etc., etc. Philadelphia: J. B. Lippincott & Co. 1867.

This Essay, which was published last year in the New York Medical Journal, comes to us in a very convenient and neat book form, doing credit to the taste and enterprise of the publisher. The subject of Inhalations is one, at the present time, of very much interest to the profession, though by no means new. Yet, from the energy with which, latterly, it has been investigated, it has afforded such satisfactory results as to have become a valuable acquisition to our means for removing or alleviating disease. In the second and third numbers of our first volume will be found a very excellent article by Dr. P. J. Lingenfelder, which goes over about the same grounds as Dr. Da Costa; we refer to that for some valuable observations on this method of treatment.

Dr. Da Costa has given us, in his Essay, the history and mode of administration of inhalations; he discusses, also, the question of the penetrability of the air passages by atomized fluids, and gives the medicines and their doses, which have been employed; lastly, he sums up very closely the results of his observations. He considers inhalations to be an addition to our therapeutic means, not by any means a substitute for what is already known: that in inhalation we possess now a means more certain, more efficient and more susceptible of being regulated than any that was formerly available. The book is well worth the attention and thought of every physician.

CONTRIBUTIONS TO THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF ANGULAR CURVATURE OF THE SPINE. By Benjamin Lee, M. D., Philadelphia: J. B. Lippincott & Co. 1867.

This is the title of a very excellent book containing several essays on the above subject. The grand object of the work is to draw the attention of the profession to the development of mechanical Therapeutics, particularly with reference to Pott's Disease.

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The first paper shows the importance of gastrolgia or abdominal pain as the initial symptom of spinal irritation. In the second essay, we have the errors in regard to the Pathology very ably shown.

The article on the correct principles of treatment for angular curvature, illustrated by various wood cuts and exemplified by typical cases, embodies the character of the whole work; the author has opened a new field for explanation, and has so far cultivated it successfully. We hope the profession will resort to this publication for information, since it contains valuable knowledge, founded on very careful observations.

Epidemic Cholera, its Causes, Pathology and History. Compiled by Dr. G. Hurt, M. D., St. Louis.—This neat little pamphlet contains, in a condensed form, the modern literature of Cholera, from the views of the most eminent authors of Europe and America, and is a valuable addition to our already large list of publications on that all-absorbing topic. We commend it to our readers.

Notice to Subscribers.—Those of our subscribers who have failed to receive all the numbers of Volume II, will please drop a note to the publisher or call at the office and state what numbers are wanting, and they will be supplied. We trust all wanting extra numbers will call promptly, especially our city subscribers.

Notice.—We have a few bound copies of Volume I of the St. Louis Medical Reporter, which we will furnish at the low price of $3 50 per volume, or we will send Volume II and a bound copy of Volume I for $6 00, in advance. Those desiring to complete their sets should do so at once, as we have but a few volumes left.

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VITAL STATISTICS OF ST. LOUIS.

From April 1, to May 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records, by J. E. FOLSOM, M D., Clerk of the Board of Health.

DEATHS DURING THE ABOVE PERIOD.

White Males	191	Still Born	26
White Females	145	Under five years of age	162
Colored Males	22	Between five and twenty years	36
Colored Females	16	Between twenty and forty years	85
Born in the United States	258	Between forty and sixty years	31
Born in Germany	56	Between sixty and eighty years	23
Born in Ireland	45	Bet eighty and one hundred y'rs	11
Born in other countries	15	Total	374

DISEASES.

Accidents	4	Fever Remittent	2
Apoplexy	6	Fever Intermittent	4
Asphyxia	2	Fever Congestive	5
Arthritis	1	Gangrene	1
Albuminuria	2	Gastritis	4
Asthma	5	Hepatitis	6
Bronchitis	18	Hemaphlegia	2
Burns	2	Hydrocephalus	11
Carcinoma	1	Hydrothorax	4
Carditis	5	Jaundice	1
Cancer	2	Laryngitis	2
Cerebritis	5	Labor	2
Convulsions	21	Marasmus	24
Contusions	1	Meningitis	16
Congestion of Brain	7	Old Age	2
Croup	6	Ovarian Tumor	1
Cholera Morbus	2	Paralysis	2
Dentition	2	Peritonitis	6
Diarrhœa	11	Pertussis	5
Disease of Heart	8	Phthisis	38
Diphtheria	5	Pneumonia	42
Dropsy	8	Rheumatism	2
Dyspepsia	1	Rubeola	6
Delirium Tremens	2	Scarlatina	7
Enteritis	6	Scorbutis	1
Erysipelas	4	Suicide	1
Encephalitis	7	Syphilis	3
Fever Typhoid	16	Trismus	4
Fever Bilious	2	Unknown	3
Fever Puerperal	3	Variola	2

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, JUNE 15, 1867. No. 8.

MENORRHAGIA CAUSED BY SUB-INVOLUTION OF THE UTERUS AFTER DELIVERY.

Read before the St. Louis Medical Society by MONTROSE A. PALLEN, M. D.

(Communicated for the St. Louis Medical Reporter.)

The uterus, after delivery at full term, is estimated to weigh about one pound and a half. The multiparous uterus weighs about an ounce, and if conception, gestation and delivery have taken place, and involution has gone on properly, the uterus has a weight of about twelve drachms. The process of returning back to its size is called *involution*. This is effected by a fatty degeneration of the muscular fibres. The whole organ becomes soft; the fibre cells are easily broken, and are filled with oily particles. The muscular fibres thus disintegrated are removed by absorption. The mammary glands removing a portion, which, it is supposed, is converted into caseous matter of the milk; the kidneys removing another portion, as oily particles are visible in the urine, and the mucous membrane of the uterus getting rid of another part in the lochial discharge.

The complete involution of the uterus requires from two to three months. If from any cause this is arrested, menorrhagia is apt to ensue. This has been noticed by Sir James Y. Simp-

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son. My father has frequently spoken of it in his lectures, and since my attention has been directed to the subject of Gynecology, I have had occasion to see the same thing several times. I do not intend in this paper to refer at all to the hemorrhages occurring after labor, from inefficient contraction of the uterus, such hemorrhages may take place even after seven or eight days subsequent to the labor, but my object is to direct attention to those flows of blood recurring several weeks or months after labor at full term, or after a premature delivery, or after an abortion. When an arrest of involution occurs the uterus remains enlarged, the blood-vessels which percolate the tissues are enlarged, and there is also a veritable congestion of the mucous lining of the organ. This condition produces a hemorrhage.

Why is it that involution is arrested? Doubtlessly this may arise in many cases from inflammation supervening after parturition; but the most frequent cause is the too early assumption of the erect position after confinement; whether in merely sitting up in bed, or getting up and standing on the feet.

For several days after labor there is no involution at all. The uterus can be felt in the hypogastric region as large as a fœtal head; the blood-vessels are yet enlarged, and will be distended from gravity if the female sits or stands up. Such distension of the vessels prevents the contraction of the muscular fibres, and it is the contractions which produce involution.

The uterus is now left in an enlarged condition. 1st. An enlarged and softened condition of the organ, with congestion of the mucous membrane; and 2d, inflammation may follow, producing an effusion of plastic matter in the cellular interspaces, thereby causing a hypertrophy of the organ, and sometimes accompanied with misplacement; or there may be an arrest in the regressive metamorphosis from the fatty degeneration to the muscular fibre at the period of fibro-plastic formation. The first named is very apt to produce hemorrhage; the second not so often, but it is a frequent cause. I will illustrate these

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conditions, and point out the remedial agencies, by the recital of two cases:

Mrs. ——— was delivered at full term of a child. On the second day the infant was taken ill, and died after eight or nine days' illness, as I was informed. During nearly the whole of this period she watched and nursed it, with all the fondness of a mother's care; sitting up in bed with the infant in her arms, and scarcely allowing herself any repose. After the death of the child, she got up in feeble health. She complained of pain in the lumbar region; pain in the hips; a bearing down sensation in the pelvis; and had leucorrheal discharges. After about three months she commenced having hemorrhages, of greater or less continuance. On account of these, medical advice was asked. The touch could easily ascertain that the uterus was too low down in the vagina; that the neck was enlarged and soft; that the os tincæ was very open, readily admitting the index finger into the cavity, and that the posterior lip was about four lines longer than the anterior. (In the healthy uterus the anterior lip is longer than the posterior.) Using Cusco's speculum, by which I was enabled to stretch open the relaxed and patulous mouth, I could observe that the posterior lip looked purplish, and that the cavity of the neck was highly congested—so much so as to be red. The sound was introduced afterward, and passed to the fundus of the organ. The length of the cavities were ascertained, in this way, to be four inches. It will be recollected that the normal length is from two inches and a quarter to two inches and a half.

The indications of treatment here were to produce a proper involution of the uterus. Whatever would do this, would restore the patient to health. In the meantime it was necessary to guard against further hemorrhage—*absolute quietude*, in the horizontal position, was enjoined. Constipation was overcome by the use of a little sulphate of magnesia dissolved in rose-water and acidulated with elixir of vitriol. In the condition of the neck of the womb, just described, the nitrate of silver is a

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valuable remedy, used about twice in a week, and the stick was easily introduced to the os internum. There was no doubt on my mind that the lining membrane of the cavity of the body was in the same condition as that of the cervix, and as the hemorrhage proceeded from it, it was touched with a solution of sesqui-chloride of iron (diluted) by means of a bit of cotton wrapped around a small silver probe with a bulb to it. This being dipped into the solution was passed into the cavity of the body once a week. In about four months the patient was cured; the hemorrhages, however, ceased in the first month of attendance.

Case 2.—Mrs. ——— had frequent hemorrhages, in some of them she bled so much that she fainted; she had had an abortion; she got up too early, and hypertrophy of the uterus was the condition when I saw her. It was too large, but the neck was of the normal color. It had a hard feel, but no other abnormal condition. As the hemorrhages were frequent, and really alarming, she was confined to bed, the saline mixture, with the elixir of vitriol, given to keep the bowels open, and, as she was very pale and weak, tonics were exhibited. Iodide of potassium was given to procure absorption, and the uterus painted with tincture of iodine. A rather longer interval than usual intervened between the hemorrhages, and it was hoped that under the treatment she would have no more. But receiving a fright from some cause, another alarming loss of blood occurred. It was necessary to use the tampon to arrest it. After the tampon was withdrawn, a draining still continued. This was at once stopped by injecting into the womb a solution of the sulphate of zinc (eight grains in an ounce of water). The injections were continued daily for several days. She remained in the city about two months, and had no more hemorrhages, she then returned home, ——— county, Missouri; but the uterus had not returned to its normal size. If she had consented to remain, and her general health had greatly improved, other treatment would have been used.

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In regard to the use of injections into the uterus, I have to remark that when the internal os is well dilated, sufficiently so as to permit the introduction of the index finger, then there rarely, if ever, supervenes the uterine colic. Once, and once only, have I ever witnessed this distressing malady, and that was because I had failed to dilate with a sponge tent; but, when such precautions were taken, I have not hesitated, in numerous instances, to inject tinct. iodine, solution of sesqui-chloride of iron, tannia and glycerine, equal parts, and the various solutions of sulphate of zinc, from six to forty grains to the ounce of water, and the same may be quite safely done when there have supervened the usual dilations subsequent to miscarriage or abortion followed by hemorrhages. As to peritonitis ever following such injections, by the passage of the fluid through the Fallopian tubes, I very much doubt, and from their anatomical relations, regard such results as very problematical.

As I have frequently observed before in this Society, I am very much inclined to believe that the profession has been rather prone to timidity in the treatment of certain uterine ailments, and that active interference, if judiciously performed, would frequently save our patients a long and serious spell of illness, and sometimes her life, when doubt and inactivity consign them to years of suffering or death. At the last meeting of this body, a gentleman spoke to me of a case he had, which evidently arose from the non-contraction of the uterine fibres after delivery, and that the hemorrhages were dependent upon sub-involution of the organ. I suggested local astringent washes, and the administration of the ergot of rye in large doses. The result, thus far, has been beneficial, as, up to Friday last, there had been no further flow after the exhibition of the treatment.

At the close of the session of the New Orleans School of Medicine on the 15th of March, the degree of Doctor of Medicine was conferred on twenty-six candidates.

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ON THE ADMINISTRATION OF CHLOROFORM.

Read before the St. Louis Medical Society by C. N. Andrews, M. D.
[Communicated for the St. Louis Medical Reporter.]

Another death from chloroform is reported in the journals, and many of the profession grow timid in its use, and others hesitate to use it at all. The discovery of anæsthetics, or of the anæsthetic properties of chloroform especially, has been considered as the greatest achievement of medical science thus far in the present century; but it is to be feared that mankind are to be deprived, or are already to a great extent deprived, of its benefits through groundless apprehensions of danger from its effects; which fears have, in part at least, arisen from a want of a proper knowledge of the true method of administering it. When I consider the method of administering chloroform given to the world by our leading authorities, and which has been most implicitly followed by nearly the entire mass of the profession, it is not to my mind at all strange that now and then a death should have occurred from its use; but it is a matter of very great wonder to me that the mortality from it has not been far greater. Dr. Simpson, of Edinburgh, in his directions for its administration, after deprecating the first or exhilerating stage as one which should be avoided, or overcome as quickly as possible, when we desire to produce anæsthesia, says: "That chloroform vapor must always be exhibited as rapidly and in as full strength as possible if you desire to have its first or exhilerating stage practically done away with and excluded, and you effect this by giving the vapor so powerfully and speedily as to apathize the patient at once. If you act otherwise, and give it in small and slow doses, you excite and rouse the patient as if nitrous oxide gas were exhibited. In order that the patient be thus brought as speedily as possible under its influence, the vapor should be allowed to pass into the air tubes by both the mouth and nostrils, and hence all compression of the nostrils, &c., is to be avoided The vapor of chloroform is about four times heavier than atmospheric air; and hence if the patient is placed on his back during its exhibition, it will, by mere gravi-

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tation, force itself in larger quantities into the air passages than if he were erect or seated." This language is quoted *verbatim* by Pereira in his Materia Medica and Therapeutics, and thus given to the world in this valuable and popular work, and with all the weight of his authority, without question or qualification. And I am not aware that any writer, either American or foreign, has ever directly questioned the correctness of these directions. It is true, however, that the recent writings of Snow, Anstie and Sansom, and the report of the Committee of the Medical and Chirurgical Society of London on the subject of Chloroform, contain facts relating to the strength of chloroform vapor that can be administered with safety, and many other valuable facts relating to its administration and its effects upon the system, from which we may infer the necessity of modifying the directions given by Dr. Simpson very materially.

It has been remarked (by Sansom, I think) that "*In a state of induced anæsthesia, there is a delicate balance in the organism*;" that "*on the one side is being robbed of many of its attributes*;" that "*on the other is death*." Let us consider for a moment what is on this side of the balance and what on that; and by availing ourselves of such facts as we may have derived from our own experience, and also that of others, let us see if this "balance" is necessarily so very delicate after all.

Chloroform, after a primary stimulating effect, produces either *narcosis* or *direct sedation*, according to the manner in which it is given. The *narcotism* it produces is perfectly safe within any reasonable or necessary bounds of anæsthesia, and is is produced in a manner similar to that of opium or alcohol, to wit: "by disturbing the normal molecular relations between the blood and the tissues, so that the nervo-muscular functions are interrupted." It produces direct sedation only by paralysing the tissues of the lungs and heart when given rapidly and in a concentrated state. It has a moderately sedative effect following and secondary to narcosis, and this is perfectly manageable, and, therefore, not dangerous; whereas a primary or directly

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sedative effect from it, produced by the paralyzing effects of a concentrated vapor, is not always manageable, and is, therefore, dangerous. Concentrated vapor may suddenly produce spasm or paralysis of the tissues of the tongue, palate and glottis, and thus lead to asphyxia, or it may so paralyze the nerves of the lungs that the demand for air is not felt. The reflex respiratory movements are consequently interrupted. Or it may, as supposed, paralyse the heart so that it will instantly cease to beat. Let us now inquire what are the prerequisites to safe and successful anæsthesia. First, the administrator should feel himself master of the situation, and the patient should not suffer from fear or excitement. There should not be a crowd of persons standing around and gazing upon the patient. The patient should not have a full stomach, or loaded, constipated bowels, as chloroform, like other narcotics, interrupts the processes of digestion, and abhors a mass of fermenting ingesta and a load of fecal matter in the bowels, holding, through the reflex sympathies, high carnival through the nervous system. The patient should occupy a lying position, and if partly on one side the better. At first the chloroform vapor should be well diluted, and given slowly, till it has had time to permeate gradually every part of the system, and the various organs have had time to accustom themselves to its effects. The system needs to be saturated with it in every part, but safety requires that this should not be done too rapidly. The physiological changes of blood and tissue and function upon which chloroform narcotism depends can not be rapidly produced without hazard. We should not lose sight of the fact that we are administering a *narcotic;* that it is narcotism mainly that we desire to produce; and that we have not only to give a sufficient quantity, but that we must give the organism sufficient time to go to sleep. We can paralyze and asphyxiate in a very short time, but true narcosis can not be produced so quickly. When we have given time for all excitement to subside, and the system time to accustom itself to the first effects of the vapor, and to establish

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an equilibrium in its effects through the system, say from two to five or ten minutes, (or even longer, if there is an obstinate resistance of the system), we may then increase the strength, and give it as fast as the functions will allow. If any of these become irregular or interrupted, we must withdraw the vapor for a moment, or lessen its strength, and let them right themselves. The point to be attained is, to keep the organic sensibilities awake (or alive rather, for these sensibilities do not sleep, they only live or die) while we put the animal sensibilities to sleep. And here is a point which claims our most profound attention. It consists of the distance between the most complete narcosis of the animal function, that it is ever desirable or necessary to produce, and the failure or death of the organic functions. I am confident that nature has given us here a very good and safe margin to work upon in the use of anæsthetics, but we must take it into consideration, and intelligently avail ourselves of it. The trouble has been that many have used their anæsthetic agents in such a manner that they have paralyzed and destroyed the organic functions, while the animal sensibilities were yet nearly in their normal condition.

The pulse, capillary circulation, respiration and the state of the muscles are the great landmarks to guide us in producing anæsthesia. Sensibility to mental and physical impressions may, however, guide us for a time. Respiration is generally short and excited at first, and sometimes excitedly irregular. We must *work* this function by giving more and then less of the vapor, till it becomes satisfactory, that is, regular, full and free. As narcosis supervenes the muscles relax, and the limbs drop as in natural sleep; but when the narcosis is very profound from the use of a strong vapor, the muscular system becomes agitated. The condition of the *orbicularis occuli* muscles has for a long time been to me a valuable index. At first they seem to contract with a vibratory action, and give the eyelids a corrugated appearance; and there is also a more or less rapid effort at winking with the eyes closed. As narcosis supervenes

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this motion subsides, and these muscles become quiet and completely relaxed, giving the eye a hollow, sunken appearance. If before narcotism takes place the breathing becomes irregular or interrupted, the pulse weak or irregular, the lips and countenance palid, it indicates that the patient is either suffering from fear, that the vapor is too concentrated or of bad quality, or that the system needs more time for acquiescence. An alcoholic stimulant will sometimes greatly aid in producing such acquiescence.

A person in a complete anæsthetic state should lay as though in a profound sleep, and not as though stunned from a heavy blow upon the head, or had apoplexy. When administering chloroform we should not asphyxiate our patients by depriving them of atmospheric air. When they are half narcotized it is not a very difficult thing to do this by a too close application of the napkin or sponge. They need just as much air at this time as at any other, and their safety requires it. A space of an inch to an inch and a half should be allowed between the face and cloth. It is only necessary that the atmosphere inhaled by the patient should contain from two to three and a half or four per cent. of the anæsthetic vapor. But the question may here be asked: What appliances should be used, and how can we regulate the strength of the vapor? Having at first used several kinds of inhalers, I long since abandoned them all for the exclusive use of the linen pocket handkerchief. It is the most agreeable to the patient, the most convenient and the safest. The expired breath should not, if it can be avoided, be directed upon it; and if the vapor is administered any length of time, it should be occasionally changed, as it soon becomes impure from the breath and changed chloroform. The strength of the vapor may be regulated with sufficient accuracy by the quantity poured at a time upon the handkerchief, the immediate effects upon the patient, and by occasionly putting the handkerchief to our own nostrils and bringing our olfactory sense to our aid. By a little practice in this way we can soon very expertly regulate the strength and effects of the vapor. A too concentrated

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vapor produces either, firstly, a choking, or later, a stunning effect, with more or less distress pictured upon the countenance, whereas a vapor of suitable strength produces a more quiet, placid somnolency.

Chloroform, when properly administered, produces a toleration of itself. When given at first largely diluted, and then with gradually increased strength till it has been completely and uniformly diffused through the system, the latter will tolerate with safety and without functional disturbance vapor in quantity and of strength sufficient for any necessary anæsthetic effect.

In producing narcosis with alcohol or opium we consider, firstly, the quantity required, and then the time necessary for the desired effect to be produced. We do not crowd them in, regardless of either time or quantity, and undertake to force a certain effect within any given time. Should not we be governed by a like consideration in administering chloroform?

Narcotism is a diminished use of oxygen, but we can not safely produce it by excluding oxygen from the lungs; but we can do this by administering agents which lessen the ability of the system to use it, and these agents, especially alcohol, opium and chloroform, have the effect to give impunity, within certain limits, to such diminished use of this element.

The history of the mortality from chloroform shows that the danger is almost entirely from its primary effects, and not often from any secondary or too profound anæsthetic effect. We therefore see that the danger is not so much in the anæsthesia as in the primary effects of the anæsthetic vapor, and we also see that safety requires quite as much, if not more, caution and skill in carrying a patient through the first stage of chloroformization as through the anæsthetic stage. These considerations have enabled me to give chloroform in many hundred cases without in any instance having had any unfavorable occurrence.

I will note only a few other points that should be regarded:

When we give chloroform our eyes should never leave the patient for one moment till consciousness is restored.

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The more robust the patient the longer time it will take to produce acquiescence. Children bear chloroform well. Drunkards do not. Summer temperature will vaporize nearly twice as much chloroform as a winter temperature. Shocks from injuries are no bar to its being given if it be gradually administered. Except in dilated, flabby hearts, fatty degeneration, or aneurisms near the heart, I know of no conditions of any organs or tissues of the body which contraindicate its use. I have administered it in cases in which peritonitis, pleuritis, pneumonia and cephalitis in various stages and degrees were present, and its effects never proved deleterious, but generally rather paliative and beneficial than otherwise.

In consequence of the occasional death from chloroform other agents have been tried as substitutes for it, but my experience with all the agents that, to my knowledge, have been recommended as such leads me to regard chloroform as the most convenient, the most efficient, the most manageable, and the least deleterious to the system of them all, and that it may be given with safety. Ether is uncertain in quality and effect. It excites, it strangles, and to some persons it can not be administered at all. It dissolves, to a great extent, the corpuscles of the blood, ane it frequently leaves the patient in a sickened, prostrated condition, which generally lasts for some time. It *may* be safer than chloroform, for the reason that the system rebels against it so strongly that it would require twice the time and twice the skill to introduce a fatal quantity that it would of chloroform.

The only other article that is proposed at present as a substitute for chloroform is the nitrous oxide gas. This, for a short operation of not much severity, may answer a very good purpose, but its effects can not be prolonged with impunity or safety, and the inconveniences attending its use are such that it can never be brought into general use.

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THE USE OF CALABAR BEAN IN TETANUS.

The following successful treatment of two cases of traumatic tetanus with the Calabar bean are given by Dr. Eben. Watson, of Glasgow, and are interesting, as affording some definite information as to the effects of the internal administration of Calabar bean. The following is abstracted from Dr. Watson's paper:

"At half-past two P. M., of the 15th of November, one square of Squire's gelatine paper, containing the extract of Calabar bean, was put on the patient's tongue through the space left by a missing tooth. Shortly after getting it she felt easier, was more cheerful, and kicked up her heels as she lay in bed on her abdomen to show the power she had over them. At three P. M. she got two other squares, at seven P. M. three squares, and at ten P. M. two more. No severe spasms occurred during this evening; she had only a few short starts, but she was always very rigid in both body and limbs, and the opisthotonos and trismus were quite marked. She was more cheerful, however, and spoke more distinctly. Pupils rather contracted. She was to have two squares of Calabar paper every hour during the night.

"16*th*.—This morning I found her quite rigid, and with frequent and severe spasms. In fact, I thought either that the papers were not sufficiently strong, or that they were losing their influence on the patient. I now, therefore, ordered the following preparation: Extract of Calabar bean, twelve grains; white wine, one ounce. This made a muddy sort of wine of the Calabar bean, every five drops of which contained about one-eighth of a grain of the extract. Such a dose was to be given every half hour, the effects being carefully watched by my assistant. It will be noticed that the doses were given very close together, for we had already learned that their effects were very short lived. The doses were regularly given till seven P. M., by which time she had taken eighty drops, or two grains of the extract. Only momentary twitches had occurred, and these principally when spoken to. At half-past seven P. M. she was in a semi-comatose condition, lying on her back, with no arching, mouth open, pupils pretty well contracted, breathing quiet and regular, pulse rather hurried and full.

"On the 18th she continued better, and the dose was increased to ten drops every hour. Notwithstanding this increase she had three fits on the 19th, when a stronger dose was determined on. For this purpose I ordered the following pills: Extract of Calabar bean, twelve grains; ginger powder of sufficient quantity to make twenty-four pills, one to be taken every hour. By mistake the apothecary made these pills of twice the strength ordered, viz, containing each one grain instead of half

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a grain of the extract. This was not, however, discovered till the evening, so that the patient took one grain of the extract every hour for eight hours without any particular effect being produced. But half an hour after the ninth had been swallowed, the patient fell into the following state: Her eyes were widely opened, staring and glassy; the pupils were contracted to pin points; the pulse was rapid and intermitting; there was a mucous rattle in the throat, and the breathing was jerky and fitful. Patient did not answer questions, and gave no sign of sensibility. She had no spasms, neither could they be induced. In fact, all the muscles were completely relaxed, except those of the back, which were still rigid. She either could not or would not move any of her limbs, or make voluntary efforts to swallow. Some brandy and water and seven drops of the tincture of belladonna were poured down her throat, she not resisting, and this was repeated in five minutes. No effect was produced on the pupils, but the expression became less death like. Towards morning the spasms, though less violent, could be easily induced; and next morning, at half past eight, I found no traces remaining of the very remarkable state in which she had been on the previous evening.

"It was thought prudent to discontinue given the bean, until December 6th, when it was recommenced in the form of tincture, made after the recipe of Dr. Frazer,* who considers five minims to be equal to three grains of the kernel; a dose of five minims of the above tincture was given every two hours, and on the following day, without any aperient medicine having been given her, patient had five large watery evacuations from the bowels. This was the more remarkable, because she had previously required a strong dose of castor oil, often fortified with croton oil, to move the bowels, and except from the effect of such medicine, they had always remained confined. I have little doubt, therefore, that this was another of the physiological actions of the bean, viz., catharsis. After this date the recovery was very rapid, and by December 22d she was quite well.

"The second case was that of a boy, aged 18. The treatment with the tincture was commenced December 7th, five minims every two hours for two days, with considerable benefit. On the 9th, four minims every hour; but on the 12th there was a return to the first dose of five minims every two hours. On the 14th the dose was again increased to six minims every two

*Tincture.—Take 1 oz. Calabar bean (deprived of husks), macerate with 1 oz. spirit of wine for forty-eight hours; then percolate with spirit of wine, so the resulting tincture may measure 2 oz.; commencing dose 5 minims. There is also a tincture very generally used, made in the proportion of 2½ oz. of the bean to 20 oz. of spirit of wine.

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hours; but on the 24th there was a great improvement, when he took the dose only three times a day; a few days afterwards he was quite well.—*London Lancet.*

MISSOURI DENTAL ASSOCIATION—SECOND ANNUAL MEETING.

The Missouri Dental Association held their second annual meeting at the St. Louis Medical College, commencing Tuesday, the 4th inst., Dr. Peebles, President, in the Chair.

Dr. Morrison read the minutes of last session, amongst which was an interesting discussion on the loss or extraction of deciduous teeth, in which Dr. Isaiah Forbes took a prominent part. The minutes having been formally approved of, the roll was called, the following gentlemen being present who were already members, besides many others who came to be enrolled:

J. H. McKellops, Aaron Blake, Edgar Park, George E. Crawford, H. E. Peebles, W. A. Jones, H. Judd, J. Payne, Edward Hale, W. H. Eames, G. W. Trauernicht, Henry Barron, Isaac Comstock, Wm. N. Morrison (the Recording Secretary), Isaiah Forbes, Edward A. Crane, J. J. Steck, Alex. Dienst, C. W. Gill, all of St. Louis.

Of the country delegations:

C. Provost, Kansas City; M. McCoy, Boonville; J. C. Goodrich, Wentzville; Sol. Horine, court house; H. Hibbler, Carondelet; E. McCune, Louisiana; C. W. Rivers, Pittsfield; J. Townsend, of Sedalia.

The acting Treasurer then read a report of the finances of the Missouri Dental Association. It was referred to the Executive Committee.

Dr. Homer Judd, D. D. S., chairman of the Executive Committee, made a report referring to subjects that would come up for discussion relative to dentistry, and also to the selection of a place of meeting.

Dr. Peebles then, as retiring President, read the following address:

Gentlemen, friends, brothers and fellow-practitioners in the Missouri Dental Association: In retiring from the presidential chair, and divesting myself of the official robes of honor and dignity that your partiality invested me with at our first annual meeting, it may not be inappropriate to the occasion, perhaps, if I should occupy a few moments of your valuable time ere I resume my place upon the floor among my peers, in reviewing some of the events more immediately connected with

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our calling, profession or history, that have transpired among us since our last meeting, which will necessarily suggest some thoughts that may call for at least a passing notice. But in the first place let us express our heartfelt gratitude to Almighty God, the creator and dispenser of all good, for His manifold blessings and mercies, with that parental care that enables us to thus meet and greet each other in our annual convocation, and honestly, earnestly and devoutly invoke His blessing upon our labors, deliberations and discussions while here assembled. Death, the remorseless tyrant, has been among us, and three of our number were claimed as his victims. In the death of Clark, Leslie and Grace we have met with a severe calamity and sustained a great loss.

John S. Clark, D. D. S., was one of the pioneer dentists of the West and South. He was a man of fair ability, a clear head, a noble and generous heart, coupled with a fine mechanical and manipulative talent. Clark was an ardent lover of his profession, and labored faithfully for its elevation. Dr. Clark was temporarily chairman in the organization of this Association.

A. M. Leslie, D. D. S., was a man of fine mind and much acquired ability. As an operator he stood fair; he was a clear and vigorous writer, and did much to elevate the profession. He was the Treasurer incumbent at the time of his death, and his loss to us is irreparable. But Dr. Leslie was too well known to you all, gentlemen, and too highly esteemed by all present, to need an eulogy at my hands.

Dr. Robert Grace was a young man of high moral worth. Very modest and retiring, he had to be well known to be appreciated. It is sad to contemplate the death of our friends and fellow-laborers, and it is peculiarly so to see our promising young men cut down at the very commencement of a prospective course of usefulness, prosperity and honorable distinction.

These, our brothers, have gone to that land from whose bourne no traveler returns. Their bodies we have consigned to the tomb; their spirits have ascended on high; but their memories we do still cherish—and by their memories, my brothers, may we all be stimulated to prepare to meet the grim messenger when he comes to summon us from our arduous labors on earth to our reward in Heaven. * * * *

Soon after the adjournment of the Association, your College Committee organized and went to work, meeting with some obstacles and discouragements, and a little opposition, but by patient, prudent and persistent action, they finally achieved success in the establishment of the Missouri Dental College, the success of which is destined to revolutionize, disenthrall

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and elevate the profession in the Valley of the Mississippi. But to the report of your College Committee I respectfully refer you for the details and facts of organization and establishment of the Institution.

Of your Committee on Legislative Enactment, I can only say that they have been faithfully advised of their duty; kindly urged to its performance; but, owing to the death of their chairman, our lamented Leslie, it was late in the session when they petitioned the State Legislature to enact a law to regulate the practice of dentistry in the State. I am of the opinion that if a prompt and vigorous course had been pursued by the committee, and a suitable form of petition had been placed in the hands of every dentist in the State at an early period after our adjournment, so as to have brought the matter fully and fairly before the people, that a very numerously signed petition could have been presented to our Legislature. And by backing this up by the presence of some of the *respectable* members of the profession, the passage of a bill could have been easily obtained, had this been *really* desirable. But as the friends of such action seem only to desire the moral effect of the agitation and discussion of the subject, we have in this matter been very successful, and even as things were managed I am of the opinion that the bill framed would have been favorably received, had it not been for some direct and active opposition, made by those who fear to have their work tried by the square of truth and the plummet of justice. I presume no honorable member of this Association desires to foist an unjust or oppressive measure upon the profession in Missouri. But certainly none but the ignoramus or the quack can desire that this matter shall be left undiscussed or unagitated.

The report of your committee will doubtless furnish you with all necessary information on this interesting subject.

The Constitution of the Association contemplates and authorizes an annual assessment upon the individual membership, and heretofore we have had no need of such assessment, because we had no use for more funds than were in our treasury, resulting from the initiation fee of one dollar each. But now, gentlemen, the case is very different. We now have a college of our own to sustain, and in my opinion we are all individually morally bound to espouse the cause of our educational appliances and institutions. The Missouri Dental College is a creature of the Missouri Dental Association. It is our legitimate offspring, and we are therefore bound to give it sustenance, parental protection and fostering care. I presume, therefore, that you will in your wisdom deem it advisable to make a liberal annual assessment upon our membership for the purpose above suggested.

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I would further suggest the propriety of such action, by resolution or otherwise, as will pledge this Association to sustain, by its corporate and individual influence, the Missouri Dental College.

The propriety of the appointment of a standing college committee, to act in concert with the Board of Trustees, may engage your attention during the ensuing sessions of this meeting.

The rather meagre supply of infirmary patients for the regular clinics during the first course of lectures seemed to warrant the expediency of keeping the infirmary open through the entire seven months of vacation, in order to attract a large patronage, and make it more generally known that such an institution exists in the city; and also to prove to that class of patients whom we serve there that we are in earnest, and that they can there find daily a good and safe operator. This plan, I think, is working well, and will have the desired effect of attracting an ample attendance of patients for all necessary clinics during the winter course.

The subject of vulcanite base, as now agitated by the Goodyear Dental Vulcanite Company, is interesting to us all, and I presume you, gentlemen, may expect me to say something upon the merits of this interesting subject. But I beg to be excused from attempting to handle so delicate a subject at present. I have no fondness for the fumes of sulphur, and "a burned child dreads fire;" an injunction was laid upon me yesterday—this closes *me* up. However, I am proud to know that I am on record for seven years past as denouncing vulcanite as a *double curse*—a curse to the people and a curse to the profession. I said it then, I said it since, I declare it *now*, and although I stood almost solitary and alone in 1850, I stood erect and firm upon the broad principles that whatever material were used to so cheapen and render easy the construction of artificial dentures was a curse to the people in detracting them from the legitimate value and love of the natural organs, resulting in their neglect and destruction; and for similar reasons it is a curse to the profession, in so cheapening artificial substitutes as to deter our patrons from incurring the expense of saving the natural teeth, and hence encouraging quackery and charletanry. Pardon me, gentlemen, I did not intend to argue the case, but merely to state it, and pass on to notice one or two other subjects.

Dental ethics probably has attracted more attention in our country since we last met than at any former period of time, at least so far as my knowledge extends.

The American Dental Association adopted a code of ethics at its annual meeting in August last, and commended it to the approval of, and adoption by, local societies.

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The great National Association, after passing along our northern frontier as far west as Chicago, rebounded to the extreme east, and met last year in Boston; but still manifesting its western tendencies, it is moving toward St. Louis, and is to meet in Cincinnati next month, where I trust Missouri will be largely represented; and in making our selection of representatives, such men as will be most likely to attend should be chosen. And as the city members are nearly all already members of the Association, or belong to a society that can send them, the selection had better be made from our brothers from the country. We owe it to ourselves, and we owe it to our patrons, to avail ourselves of all the light we can get in dentistry. Ah, yes! and we owe it also to our profession. We are almost criminally ignorant of the peculiar organism of the organs we operate upon daily. There lie hidden vessels and mysteries in the dentine and cementum that the unaided organs of vision can never explore; and who, even among the really learned, can tell us all about the circulation in a tooth? Why is healthy dentine sensitive? What are the chemical constituents of the soft-solid contents of the dentinal tubules?

Dental histology is, at this time, engaging the best minds in the profession, and we may reasonably expect that science will be much benefited by such efforts, if well directed and patiently persevered in.

The American Dental Convention held its sixth annual meeting in the city of New York, in August last; and resolved to locate there, and hold semi-annual meetings. So the great American Dental Convention has virtually ceased to be national, and is now local, and may eke out a sort of semi vital existence a few years longer. But still I can but regret, that after she gave birth to so fine a daughter as the American Dental Association, and saw her grow to maturity, the dear, old mother had not nobly and honorably died, and have been decently buried by her numerous friends.

The Dental College Association has been organized and established since our last annual meeting, and marks a very notable epoch in dental education, and also in the history of our young and rapidly growing profession. This I regard as a very important movement, and one that, if judiciously managed and properly controlled, will act as a strong lever in the elevation of our professional standard.

It may not be inappropriate in this connection for me to say a few words on education—dental education. I see those before me to-day that, like your humble speaker, did not enjoy very favorable opportunities in their younger days of acquiring a dental education.

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The meagerness of our literature, the entire lack of anything like a periodical dental literature, the total non-existence of dental colleges, with not even a single dental society or association in the country, were circumstances not at all promotive of, or auxiliary to, advancement in dental science or education.

In the year of our Lord, 1840, there was not a single man known in the world as a graduate in dental surgery! In that year the Baltimore College was opened, and in 1841 Robert Arthur and R. Covington McKall were graduated, and the honorary degree of D. D. S. was conferred upon eighteen other gentlemen. This old school has had an average graduating class of about fifteen yearly up to the present time—graduating 410 students and conferring 150 honorary degrees.

There are now six dental colleges in the United States, and there were 276 students in actual attendance on lectures last winter, and of this number 108 graduated through regular examination and vote. At the time alluded to above many young men enlisted in the ranks of the dental host, under a false idea of its great destiny and their greater responsibility. Men, honest and earnest, desiring to make an honest living and assume or maintain an honorable position among men, but at the same time ignorant of the nature and bearing of their calling, regarding dentistry as something a little more respectable and lucrative than the ordinary mechanic arts, and a little less honorable than the learned professions; also a thing much more easy of acquisition. To be made a shoemaker or house-carpenter was the work of years. To acquire a knowledge of medicine or law took time, study and money; but to be made a dentist was the work of a few weeks, or months at farthest. Hence the shorter road to a trade that promised an easy livelihood was frequently chosen by young aspirants for a title and a living. I say this was often the case then, and there seemed to be some excuse for the course pursued. But may I not ask if such course is not in this, our day, of much greater light and better facilities for acquiring a correct knowledge of the science of dentistry? Do our young men generally at this time essay to enter our ranks with a clear and correct understanding of the magnitude of the undertaking, or a definite conception of the requirements of a dental practitioner? Do they first secure a good literary education as a foundation upon which to build up a dental education? Certainly, in a majority of cases, they do not, but they rather commence the study of dentistry with a very limited English education or rudimental training.

It is said by an essayist, and truly said, that if we desire to raise our professional standard, we must elevate the individual members of the profession—and this can not be done by merely

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graduating young men of vulgar tastes and habits. We must have well educated young men; such as are refined in mind and taste, and capable of a fine polish, to fill up our ranks, and take our places as we fail or fall. Such men can and will give tone and standing to the profession, and bring it up to the level it must attain before it can accomplish all that it should do as a profession.

But should we, who now compose or constitute the dental profession, stand still, or fossilize under the notion that we are too old and too well established to need the teachings of any man or any school? There are, perhaps, only two men now in the State of Missouri who have practiced over thirty years, and I claim to be pretty well acquainted with both of these gentlemen, and I take the liberty to say that they have not yet ceased to be students or learners, and I will venture the assertion that you, any one of you, gentlemen, may take a member of the class of first course students of the M. D. College, and examine him thoroughly on dental science and practice, and note all his errors and mistakes, and then permit him to examine you, and note all your errors mistakes, and the comparison will be in his favor, if you have not yourself been attending lectures, or studying more attentively than we practicing dentists generally do. To keep up with the progress of the times we must study, we must also progress.

The curriculum of study, as well as the number and length of the courses of the lectures in our colleges, will have to be modified and extended from time to time in order to meet the demands of the times. The man who graduated in a dental college twenty years since could not graduate in the same school to-day with no better preparation now than he had then, and the graduate of 1866 could not in like manner pass muster in the same school in 1886. This is progress. So, too, in the medical profession. The report on education made by Dr. Gross, of Philadelphia, at the late meeting of the American Medical Association, recommends three courses of six months' lectures, instead of the two courses of four or five months. The increasing intelligence of the people, the general diffusion of light and knowledge, as well as the progressive tendency of the age, demand these reforms, and we have no chance—no option. We must qualify ourselves to serve our enlighted patrons in the best manner.

Increase of lectures, enlargement of the course of study, and the extension of the term of pupilage, together with the necessary demand for a better literary basis upon which to lay the foundation of a professional course of study, will all tend to an increase of the expense of acquiring a thorough dental education, which will, in the very nature of the case, draw to our

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standard a better class of minds. The idle, the indolent and the drone do not seek the long, rugged or difficult path to eminence. But the really meritorious, the industrious, and the brave youths, fear not to encounter difficulties and dangers in the pursuit of knowledge, fame and honor.

We want *students*, not mere apprentices. We must all *study* the *science* of dentistry. We must dig down deep, and not merely scan the surface.

The more we study the spiritual or organic, the more elevated we become in the scale of social being, for we approach that much nearer the to Divine. It is this that stamps upon the professional man a character that the world recognizes above the one who merely sees things mechanically. It is nevertheless true, that in our art an intuitive knowledge of mechanism is indispensable. No one can be successful in practice without it. Neither can we be intelligent and respected in this department, unless intimately associated with medicine. Every year am I more fully convinced that if we, as dentists, wish to be honored and respected, and retain the title of Dr., we must no longer rest satisfied with office tuition, but seek some medical or dental school. The colleges are the only sure means of giving us that status among men of science that we so much covet, or at least should. Gentlemen here may fancy that their five or ten years' practice has placed them side by side with all others, and that schools are of no value to the old practitioner. You may say: "They will do for the beginner, but we have acquired all necessary knowledge, and our practice would not be any larger, or we the better therefor." Let me correct this error. If your practice were no larger, your patients would appreciate the effort, and be willing to pay you higher prices, for the exercise of the mind as well as that of the hand. If you are *capable* of improvement, it would do it. The contact alone with others would rub you up, unless you are rusty throughout. When our eyes are opened to look in upon that body, framed by such infinite power, and finger o'er that face divine, as it lays upon the dissecting table, and are made cognizant of its high organization, even to that ivory, which we slay without a thought of its vitality of the *adjacent structures*, and of the large vessels which supply nourishment, and which if cut would prove fatal, we will stand amazed at our ignorance, and that our operations have not been more destructive of tissue and of life itself. Surely we are blest above all other surgeons; so many mistakes committed by the general surgeon would result disastrously to him and his profession. Erysipelas, pyemia, etc., the occasional sequel of even his educated hand, should oftener follow in the wake of uneducated dentists. Pause and think of the many abscesses that open their

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foul mouths to mark the skill of some ruthless operator; the wholesale destruction of one of our greatest ornaments, the human teeth, at the hand of him who knows little else than artificial substitution. Look at the malformed arches—the work of one who has never recognized dental education.

It is, I believe, generally conceded that the American dentist holds a pre-eminence in Europe at this time, and he has done so for a quarter of a century. Now, why is this? Because we Americans took the lead in the great cause of dental education. We started the first dental journal and established the first dental colleges, organized societies, and put the great machinery in motion that diffused light in our profession. We sent out our graduates, who gave us a name and status there. We recived their students, and graduated them, and they were proud to be called and known as *American dentists.*

But can we hold this rank and maintain our vantage ground through the years to come? Can we do this even for half a century more? In my humble judgment, gentlemen, we will have to elevate our standard of professional attainments, or we we will fall from the honored position of leaders to the humble one of followers, before a quarter of a century passes by. The English dental writers are now, I believe, regarded as superior to our American authors. Where is the work of an American dentist that ranks with Tomes' Dental Surgery?

It is not unfrequent that we hear it said among dentists that the English and French are away behind us in dental education. Let me ask, is this true? Do the facts in the case prove it true? Let us see. Here is an article from the London *Lancet*, which, I think, may turn some light on this subject. We will read it and see:

"Professional Education of Candidates for the Examination in Dental Surgery in the Royal College of Surgeons in England.—Candidates are required to produce the following certificates: Of being twenty-one years of age. Of having been engaged during four years in the acquirement of professional knowledge. Of having attended at a school, or schools, recognized by this college, not less than one of each of the following courses of lectures, delivered by lecturers recognized by this college—namely: anatomy, physiology, surgery, medicine, chemistry, and materia medica. Of having attended a second winter course of lectures on anatomy, or a course of not less than twenty lectures on the anatomy of the head and neck, delivered by lecturers recognized by this college. Of having performed dissections at a recognized school during not less than nine months. Of having completed a course of chemical manipulation, under the superintendence of a teacher or lecturer recognized by this college. Of having attended, at

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a recognized hospital or hospitals in the United Kingdom, the practice of surgery and clinical lectures on surgery, during two winter sessions. Of having attended, at a recognized school, two courses of lectures upon each of the following subjects, viz.: dental anatomy and physiology (human and comparative), dental surgery, dental mechanics, and one course of lectures on metallurgy, by lecturers recognized by this college. Of having been engaged, during a period of not less than three years in acquiring a practical familiarity with the details of mechanical dentistry, under the instruction of a competent practitioner. Of having attended at a recognized dental hospital, or in the dental department of a recognized general hospital, the practice of dental surgery during two winter and two summer sessions.

"N. B.—The students of London schools are required to register the above certificates at this college, and special returns will be required from the provincial schools. The fee for the certificate of fitness to practice as a dentist is ten guineas, over and above any stamp duty."—[Ibid.

Hence, you see, that from the Royal College of Surgeons of England, will emanate men as well qualified or better prepared by a professional education as any that the American colleges will turn out, at least under their present regime, for, in the language of one of the venerable fathers of the profession, Dr. Atkinson, "We are a young body, and it would not be fair to suppose that a majority are up to their best ideal. Educating the people is really the best thing; we can not press that point too strongly; it reacts upon us by keeping us up to the highest notch in our profession. Men who have been A No. 1, but stood still, are drifting down the current; every one who stops advancing grows old fogy. When every man accepts his profession as his divine commission, we shall have a profession which will stand in the van as doers of service, and be recognized as such."

But I have already said enough on this subject, and now come to things more immediately connected with the association and its annual meeting.

But of the advancement of dental education, and the social elevation of the profession in France, I regret to be forced to say I can not see such encouragement as in England. True, the French dentists publish a couple of respectable dental periodicals. But still they have done but little so far to educate or elevate the dentist as a class. His social and moral status is bad. We are told that at a period not very remote it was a common saying there in disputing a man's word to say, "Why you lie like a dentist;" and, gentlemen, if we are to

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rely upon newspaper reports, the case is not materially changed for the better even at this day.

For doubtless you may have noticed that a Mr. Jarvis of this country brought suit in court against a picture dealer for selling him a counterfeit or imitation for a genuine work of the celebrated Leonardo, but failing to prove fraud Mr. J. lost his case, and had to pay his 60,000 francs.

The writer says that in another picture case heard on the same day, the dealer was not so fortunate. A well known dealer on the Rue Lafitte sold to a dentist named Verdier a painting of Delacroix for 3,500f. It was proved to the satisfaction of the judges that the work in question was left by Delacroix, at the time of his death, a sketch scarcely begun, and that it had been turned into a finished painting by some unknown artist since his decease. The court held that this was a fraud, and that the purchase must be rescinded. The dealer pleaded two things—first, that if the picture had been a genuine Delacroix, it could not have been sold for so small a sum; and second, that all dentists were notorious liars.

But let us now return from our trans-Atlantic trip, and attend to some little matters that more immediately concern us in our present gathering.

My brothers, when you elevated your humble speaker to this honorable and responsible position, he promised that by your assistance and kind indulgence he would endeavor to discharge his duties according to the best of his abilities and the lights then before him. This promise he has faithfully and sacredly kept, and he feels that he has honestly striven to redeem his pledge; how far or how well he has succeeded he leaves you to judge. Accuse him, or excuse him, or approve his acts, or condemn them, as your judgment or conscience dictate, and you may rest assured that you will neither offend nor flatter him who now addresses you.

During our session last June, the chair on several occasions urged and besought you, gentlemen, to prepare yourselves better for the discussions at this meeting than we were then prepared. He asked you all to write papers on some of the subjects presented for our present consideration by the Executive committee, and he even took occasion to beseech many of you individually, in private conversation, to attend to this duty, that we might have a more interesting and profitable time this year than we had last year.

In August, he also called upon you individually, through a printed address, to prepare yourselves for the present meeting; and to not a few of you, gentlemem, he has written and spoken on the same subject, and from the many cordial responses and fair promises he has received, he is led to expect to hear many

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valuable and interesting papers read, and also to find your minds in much better working order than they were last year. It does not pay, my brothers, to leave your offices and homes and come here to merely legislate—and gas a little. We must have good, earnest, honest, sincere efforts to improve our minds, acquire facts, and to enlarge our views of the subject matter that brings us together. Every one should come here to impart such knowledge as he may possess, and imbibe all he can—let all be teachers and every one a learner. And now, these our brothers, who have come from a distance, have a right to expect that we, who live in the city, will have the manliness to meet them regularly here, and engage heartily in all the discussions, and show them that we are at least gentlemen; and the true gentleman can not waive the rights of hospitality or violate true courtesy. And you, gentlemen of the country, owe it in turn to us to do your shopping and calling in the intervals between the sessions, and be in your places promptly at the reading of the minutes at each session. So also you are not expected to sit silent and look on, but to bear your full part in all the discussions. Now, brothers, if we will all resolve to do our whole duty while we are together, we will have such a meeting as we have never yet witnessed in St. Louis, and this meeting will give an impetus to dentistry in Missouri and contiguous States that will be felt and acknowledged through long years yet to come.

But I must not forget that there are many, very many, of you gentlemen present who have messages of greater import to deliver to us than anything that I can say on this occasion, and to you I must give place.

For the honor you conferred upon me last year, and the confidence you have manifested in me by calling me to preside over you, I feel grateful, and for your patient hearing of this desultory address I thank you, and with pleasure I retire from this honorable and responsible official position, and resume my place among my brothers, to engage in the business and discussions of the Association, and give place to an abler and a better man, who may be chosen to preside over us during the ensuing year. Such a man can be easily procured. But to find a man who cherishes a more ardent love and respect for his profession, or one who has labored, or will labor, more constantly and faithfully for its advancement, or one who will make greater personal sacrifices for its honors and dignity may not be so easily found to fill the chair. And again, gentlemen, I thank you.

After this address, Dr. Eames, from the Committee on Legislative Enactments, presented his report, which occasioned some lively debate, and after some interchanges of opinion, Dr. I. Forbes made a motion that the report, being incomplete,

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should be handed back to the committe. This was seconded and adopted without hesitation.

The meeting then adjourned to half-past two the same afternoon.

AFTERNOON SESSION.

The meeting re-assembled at 2:30 P. M.

The President, Dr. Peebles, having taken the chair, the minutes of the morning session were read and adopted.

The chairman begged to offer as a suggestion that it would be advisable, if gentlemen who wished to offer a resolution would do so in writing, as such was the general parliamentary rule, and would greatly facilitate the transaction of business.

Dr. Peebles having a report to make, as chairman of a committee, upon the general business of the Missouri Dental College, vacated the chair, which was assumed by Dr. M. McCoy, the Vice-President.

The report was then read. It referred to the organization of the College Association, and the various steps which had been taken to establish it legally. It described the progress made in the number of matriculants, and spoke in feeling, generous tones of the lamented Dr. Leslie, who had been a tower of strength to the Association, and in losing whom they had experienced a deficiency difficult to be supplied. It spoke, also, of the genuine position the college occupied in having seven professors and three demonstrators, and in being connected with so admirable an institution as Pope's College.

The report being submitted, was, after considerable discussion, adopted.

The next business being the admission of new members, the following were received into the Association:

J. T. Haskell, Lexington, Missouri.
S. H. Smith, Marion, Illinois.
J. R. Mathews, St. Louis, Missouri.
L. F. Prince, St. Louis, Missouri.
C. Hanniman, Shelbyville, Illinois.
R. H. Mace, O'Fallon, Illinois.
A. W. Scott, Huntsville, Missouri.
F. A. Brewer, Palmyra, Missouri.
T. Swap, Boonville, Missouri.
A. C. Griggs, Warrensburg, Missouri.
P. M. Hutchinson, Arrow Rock.
J. A. Lumpkins, ———.
S. W. Brown, Carlisle, Illinois.
G. A. Bowman, St. Louis, Missouri.

Next in order was the election of officers for the ensuing year.

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President—Homer Judd, M. D., St. Louis, Missouri.
1st Vice-President—E. McCune, Louisiana Missouri.
2d Vice-President—J. C. Goodrich, Wentzville, Missouri.
Recording Secretary—George Crawford, St. Louis, Missouri.
Corresponding Secretary—Wm. N. Morrison, St. Louis, Missouri.
Treasurer—I. Forbes, D. D. S., St. Louis, Missouri.
Executive Committee—W. H. Eames, St. Louis, Missouri; M. McCoy, D. D. S., Boonville, Missouri; G. V. Black, D. D. S., Jacksonville, Illinois.

Drs. Forbes and McKellops were appointed to conduct the president elect to the chair; upon taking which, he remarked the hour was late, and he did not wish to make a speech, but he would thank the gentlemen very kindly for the unexpected honor conferred upon him. He then announced that the *cliniques* would be held at the infirmary at eight o'clock, A. M., to-morrow.

The meeting then adjourned to ten A. M. the next day.

India Rubber Varnish.—That India rubber dissolved in various liquids yields a good varnish is well known; but in general they are too viscid for delicate purposes, and are only good for making stuffs water-proof. India rubber liquified by heat, dissolved in oil or coal tar, or drying linseed oil, does not give a varnish of sufficient fluency or free from smell. Moreover, a considerable quantity of India rubber remains undissolved in a gelatinous state, suspended in the liquid, so that the solution is never clear. Dr. Bolly has recently published some remarks on the subject which may be useful. If India rubber can be cut into small pieces and digested in sulphuret of carbon, a jelly will be formed; this must be treated with benzine, and thus a much greater proportion of caoutchouc will be dissolved than would be done by any other method. The liquid must be strained through a woolen cloth, and the sulphuret of carbon be drawn off by evaporation in a water bath; after which the remaining liquid may be diluted at will with benzine, and frequently shaking the bottle which contains it. The jelly thus formed will partly dissolve, yielding a liquid which is thicker than benzine, and may be obtained very clear by filtration and rest. The residue may be separated by straining, and will furnish an excellent waterproof composition. As for the liquid itself, it incorporates easily with all fixed or volatile oils. It dries very fast, and does not shine unless mixed with resinous varnishes. It is extremely flexible, may be spread in very thin layers, and remains unaltered under the influence of air and light. It may be employed to varnish geographical maps or prints, because it does not reflect light disagreeably as resinous varnishes do, and is not subject to crack or come off in scales. It may be used to fix black chalk or pencil drawings; and unsized paper, when covered with this varnish, may be written on with ink.—*Journ. Applied Chem.*

Greatest Depth of Mines.—The Eselchacht Mine at Kuttenburg, in Bohemia, now inaccessible, is the deepest mine in the world, being 3,778 feet below the surface. Its depth is only 150 feet less than the height of Mount Vesuvius, and it is eight times greater than the height of the pyramid of Cheops. The bore of salt works of Minden, in Prussia, is 2,231 feet deep, and 1,393 feet below the level of the sea.

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THE MEDICAL REPORTER.

ST. LOUIS, JUNE 15, 1867.

Law to Prevent Criminal Abortion.—The following important low was passed at the last session of the General Assembly of Rhode Island:

"AN ACT in addition to and in amendment of chapter 216 of the revised statutes of offenses against chastity, morality and decency.

"*It is enacted by the General Assembly as follows*:

"SEC. 1. Every person who shall be convicted of wilfully administering to any pregnant woman, or to any woman supposed by such person to be pregnant, or of advising or prescribing for such woman, or causing to be taken by her anything whatever, or shall employ any means whatever, with intent thereby to procure the miscarriage of such woman, or of aiding or assisting therein, or by counseling and procuring the same, unless the same is necessary to preserve her life, shall, if the woman die in consequence thereof, be imprisoned not exceeding twenty years nor less than five years; and if she do not die in consequence thereof, shall be imprisoned not exceeding seven years nor less than one year; *provided*, that the woman whose miscarriage shall have been caused or attempted, shall not be liable to the penalties prescribed by this section.

"SEC. 2. Any person who shall be indicted for the murder of any infant child, or of any pregnant woman, or of any woman supposed by such person to be or have been pregnant, may also be charged in the same indictment with any or all of the offenses mentioned in the preceding section, and if upon the trial the jury shall acquit such person on the charge of murder, and find him guilty of the other offenses, or either of them, judgment and sentence may be awarded against him accordingly.

"SEC. 3. Whoever knowingly advertises, prints, publishes, distributes, or circulates, or knowingly causes to be advertised, printed, published, distributed, or circulated, any pamphlet, printed paper, book, newspaper notice, advertisement or reference, containing words or language giving any notice, hint or reference to any person, or to the name of any person, real or fictitious, from whom, or to any place, house, shop, or office, where anything whatever, or any instrument or means whatever, or any advice, direction, information, or knowledge may be obtained for the purpose of causing or procuring the miscarriage of any pregnant woman, shall be imprisoned not exceeding three years.

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"SEC 4. All acts and parts of acts inconsistent herewith are hereby repealed: *provided, however,* that nothing in this act contained shall in anywise affect any complaint or indictment now pending, or that may hereafter be made or found for any offense committed before the passage of this act, against the provisions, or any of them, of an act in addition to chapter 212, title XXX., of the revised statutes, 'of offenses against the person' passed at the January session, 1861.

"SEC 5. This act shall take effect on and after its passage.

"A true copy: Attest,

"JOHN R. BARTLETT, Secretary of State."

We would wish our law makers would take the subject under consideration. The evil is one of the most terrible in its effects on health, and one that unless, speedily held in check, will undermine the very existence as well as the virtue of society. The third section of the above enactment should be especially carried out. In almost every paper, religious as well as secular, we see set forth in large type nostrums offered for sale, some openly declared to be a sure preventive of conception, and with certainty to procure abortion; others with a statement not to use them during certain periods, as if so used, abortion will certainly be produced, which fully proclaims their use. In all large cities is the crime of abortion daily practiced, even by those professing respectability in our profession, as well as by the lusts of specialists, female doctors and nostrum venders, and it is time all right-minded, thinking persons should consider this "crime akin to murder" in its true sense, not only as regards its influence on society and health, but also in a moral and conscientious point of view.

Neuralgia.—Dr. Ashley N. Denton, of Sutherland Springs, Texas, in a letter to us of late says the following of this disease:

There is, perhaps, no disease in the whole catalogue of ills to which our poor flesh is heir, not directly fatal, that so often baffles the skill of the physician, and as a consequence renders his ministrations unsatisfactory to himself and his patient. The books, too, are unsatisfactory upon the subject. They generally tell you to "search for the cause, and, if possible, re-

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move it." But in a majority of cases, which I have been so unfortunate as to meet with in my practice, I have utterly failed to discover any cause whatever. In a few cases I have succeeded in removing the facial variety by the extraction of a carious tooth; and in a few others, where the pain occurred periodically, I have cured my patient with sulphate of quinine; but, as before remarked, in a majority of instances, I have had to content myself with the administration of palliatives

Chloroform, as administered by Dr. Tanner, has proved the most useful in my hands of all other palliatives, for it is nothing more than a palliative, although the patient generally long remains free from pain after passing from under the influence of the anæsthetic. I have occasionally succeeded in relieving the intense suffering from facial neuralgia by the following local application:

℞. Oleum Camph. - - - - - - - - ʒii
Pul. Opium. - - - - - - - - gr. xx
Nitrate potassa. - - - - - - gr. xv
Mix well in a mortar, and apply to a denuded surface.

The Marine Hospital.—This hospital, intended for the treatment of the boatmen of our Western waters, has undergone thorough repair and renovation, so that now it is equal, if not superior, to any institution of the country for the treatment of the sick. We were highly pleased at a visit which we lately made there, to see the supreme order which reigned throughout.

The hospital is under charge of Dr E. F. Smith, the accomplished physician and surgeon, who is assisted by Mr. George Kyler and his lady, as Steward and Matron, both thoroughly acquainted with the duties of their position.

Albany Medical College.—We beg leave to direct the attention of our readers to the advertisement of the Albany Medical College, which appeared in our last issue. The College is of long established reputation, and, as will be seen, contains in its

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Faculty some of the most prominent professional men of the country. Fifty-three students were graduated at the close of the last term.

The following additions have been made to the Faculty of College: S. Oakley Vanderpoel, M. D., Professor of General Pathology and Clinical Medicine; James E. Pomfret, M. D., Professor of Physiology; John V. Lansing, M. D., Professor of Materia Medica.

VITAL STATISTICS OF ST. LOUIS.

From May 1, to June 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	170	Still Born	36
White Females	128	Under five years of age	160
Colored Males	17	Between five and twenty years	31
Colored Females	16	Between twenty and forty years.	43
Born in the United States	241	Between forty and sixty years	42
Born in Germany	47	Between sixty and eighty years	14
Born in Ireland	23	Bet. eighty and one hundred y'rs	5
Born in other countries	15	Total	326

DISEASES.

Accidents	3	Fever Nervous	2
Abscess	2	Gangrene	1
Apoplexy	2	Gastritis	3
Asphyxia	1	Hepatitis	3
Asthma	1	Hemiplegia	2
Bronchitis	7	Hydrocephalus	11
Burns	2	Hydrothorax	3
Carditis	5	Laryngitis	2
Cancer	1	Marasmus	20
Cerebritis	6	Meningitis	6
Convulsions	11	Old Age	1
Congestion of Brain	5	Paralysis	3
Croup	5	Peritonitis	9
Diarrhœa	6	Poisoning	2
Drowned	2	Premature Birth	5
Diphtheria	2	Pertussis	10
Dropsy	5	Phthisis	35
Delirium Tremens	2	Pneumonia	32
Dentition	1	Rheumatism	2
Enteritis	6	Rubeola	6
Erysipelas	3	Scarlatina	2
Encephalitis	2	Scrofula	3
Fever Typhoid	10	Syphilis	2
Fever Bilious	2	Tetanus	2
Fever Puerperal	5	Trismus	3
Fever Remittent	6	Unknown	5
Fever Intermittent	6	Wounds	2
Fever Congestive	4	Variola	2

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY.

EDITED BY

J. S. B. ALLEYNE M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, JULY 1, 1867. No. 9.

TYPHOID FEVER.

Read before the St. Louis Medical Society, by E. MONTGOMERY, M. D.

[Communicated for the St. Louis Medical Reporter.]

From the earliest medical records we find ingenious theories and lengthy disquisitions on the cause, nature and treatment of fever. Hippocrates and his contemporaries for the most part considered that fevers arose from some disturbance, disproportion or fermentation in the animal fluids, and may therefore be justly styled humoral pathologists. Their remedial management consisted in bleeding, and in the free use of purgatives and emetics; diaphoretics, diuretics and deobstruents were also resorted to, in order, as they supposed, to eliminate the irritating elements from the system. It is here worthy of remark that at this time, after a period of over twenty-three hundred years, medical men should be coming back to the pathology and therapeutics of the ancients: blood contamination the *causa morbi*, and eliminatives the *methodus medendi!*

Asclepiades seems to have been the first among the Grecians who insisted on a mild and gentle treatment, for although he had no faith in the *vis medicatrix naturæ*, yet he condemned a

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resort to heroic or violent remedies. Erasistrates was the first who insisted on the connection of fever and inflammation; he believed these morbid states consisted in a "transfusion of the blood into the arteries, disturbing the spirit they contain and giving it an irregular direction. Fever he believed to arise from the presence of blood in the large arteries, and inflammation from a congestion of blood in the capillaries." He was opposed to the bleeding and purging of the Hippocratic school, and recommended low diet, emetics, lavements, warm baths, frictions, etc.

The Dogmatists, as they were called, conceived fever to "arise from the abundance of the bile, its quantity determining the type of the disease. The maximum, in their opinion, produced continued fever of a high grade, a less quantity, quotidians, and the minimum, quartans." Our own practitioners of forty years ago must have embraced the opinion of the Dogmatists, for they certainly seemed to attribute almost all fevers to bile, and conceived its expulsion the *sine qua non* of successful practice.

The Methodic school elucidated a pathological and physiological theory very nearly approaching some of the present day. According to them, fever consists in an increase of heat and of the pulse; and they explained the generation of this heat and accelerated pulse by saying that the fundamental corpuscles in their motion through the system, by some disagreement with the pneuma, and by being obstructed in their passage through the pores, fever was the result. Herodotus placed great confidence in sudorifics and warm bathing; these he considered to be serviceable by fortifying the pneuma or spirit and assisting it to expel heterogeneous particles. Here again we have the doctrine of elimination shadowed forth.

Galen attributed fevers to a "degeneration or putrefaction of the humours, and to a certain change in the pneuma, developing an abnormal degree of heat. The heart and arteries he supposed to participate consecutively in the derangement.

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Continued fevers had their source in an alteration of the pneuma of the humours, quotidians in a degeneration of the mucus, tertatrins in that of the yellow bile, and quartans in a putrefaction of the black bile." Galen's theories were the standard doctrines for many ages, and even to very modern times counted many followers; although it is certain that he never much contributed to increase real practical knowledge, his system being too much given to minute abstractions and metaphysical reasoning.

It is passing strange that so little advance was made in pathology or therapeutics from the times of Hippocrates, four and a half centuries before the Christian era, until the days of Sydenham, about the middle of the seventeenth century. Sydenham followed the inductive method, and, like the father of medicine, closely noted and observed the operations of nature, and was guided in his pathology and therapeutics more by observation and experience than by subtle speculations or abstruse theories.

Stahl and Hoffman, Cullen and Gregory, seem to attribute the phenomena of fevers to some cause acting on the brain and nervous system, inducing diminished nervous energy along the superficial capillaries, accompanied with spasm; reaction of the heart and larger arteries supervening in consequence of this state.

Dr. Rush rejected the idea of a plurality of fevers. According to him there is but one fever, and one cause of fever, viz.: stimulus.

Dr. Southwood Smith believed all continued fevers as one great malady, never differing in nature, but in almost every two cases differing in intensity; and giving rise in their differences to various forms of disease. He accordingly only admits of grades of intensity; his lowest grade being *Synochus Mitior;* second grade *Synochus Gravior;* third, *Typhus Mitior;* fourth, *Typhus Gravior.*

Now at first this seems very plausible, for in the common

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continued, the Typhus and the Typhoid, there appears but little difference, except in gravity and intensity; the symptoms and the remedies used being very much alike. But, on a close and critical examination, the differential diagnosis is palpable and distinct. They will be found to differ essentially in many of their symptoms, in their mode and manner of accession, in their duration and termination, and especially in their pathological characteristics.

Brown, the contemporary and rival of Cullen, adopted the strange and simple theory that all fevers were either sthenic or asthenic, and therefore only required depletives or stimulants for their mitigation or cure.

It is worthy of remark that as soon as fever began to be attributed to some local inflammation, Broussais took up the extravagant notion that all the essential fevers of authors are to be ascribed to gastro-enteritis, simple or complicated. So true it is that as soon as some startling theory or doctrine becomes fashionable, men will not only embrace it with enthusiasm and without examination, but carry it to extreme and extravagant lengths.

Petite, Serres, Bretoneau and Louis, by directing attention to the lesions of the abdominal viscera in some cases of continued fever, were instrumental in first discriminating in a clear, distinct and positive manner the essential difference between Typhus and Typhoid fever. And although for a long time many of the leading physicians of Europe failed to recognize or acknowledge that Typhus and Typhoid fevers were two entirely distinct diseases, yet the labors of Louis, of Jenner, and of Bartlett of this country, have now convinced most men of this important truth.

The definition of the justly celebrated Pinel, that "Essential fevers are acute diseases in which there is a quick pulse, hot skin, and disorder in the various functions, the symptoms being independent of local lesion," is very nearly allied to that of Christison, of Edinburgh: "After a preliminary stage of lan-

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guor, weakness, and defective appetite, acceleration of the pulse, increased heat, great debility of the limbs, and disturbance of most of the functions without primary local disease." Fordyce's well known description is perhaps as comprehensive as any. He says: "Fever is a general disease, which affects the whole system; the head, the trunk, the body, and the extremities; the circulating, the absorbing, and nervous systems; the skin, the muscular fibres, and the membranes; the body, and likewise the mind." Copland's definition: "Painful lassitude, with debility of the corporeal and mental faculties, alteration of the animal heat and of the secreting functions, accelerated circulation, increased thirst, and abolition of the appetites."

The definition given by Dr. Baumgarten, in the October number of the St. Louis *Medical Journal*, may be thus stated: "Fever is caused by a pyrogenic material which enters the blood, increases organic change, which results in an increased production of heat and waste of tissue, which increased production of heat leads to general elevation of the temperature, which causes anatomical lesions, disturbances of the circulation and of the functions of the nervous centres."

As before intimated, the symptoms of three forms of continued fevers are very much alike. They all commence with chilliness, languor, anorexia, headache, pains in the back and loins, short, disturbed sleeps, scanty urine, tongue nearly always dry, and generally coated with a whitish-yellowish brown, or nearly black fur; mental aberration, delirium, subsultus tendinum, *muscæ volatantes*, picking of the bed clothes, etc., etc. But in Typhoid fever the attack comes on more gradually, with more premonitory symptoms than in Typhus. Typhoid fever attacks the young, but seldom the old, which is unlike Typhus. We find Typhoid in all situations, even the most salubrious; and in the clean, airy apartments of the rich, as well as in the filthy hovels of the poor; whilst Typhus is partial to the over-crowded ship, jail, camp or cellar. In Typhoid we have the pale or slightly flushed countenance, whilst

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in Typhus we have the dull, heavy, livid face; even the delirium of the former is more lively, active and versatile than that of the latter. In Typhoid we have epistaxis very often; hardly ever in Typhus. We see diarrhœa with ochrey-colored or pea soup stools in the former, whilst in the latter we have constipation with dark colored tarry stools. In Typhoid there is tenderness in the abdomen, with gurgling and tympanites; whilst in Typhus these symptoms are absent. In many cases of Typhoid we see the rose colored papular eruption; in Typhus we never see these, but sometimes mulberry spots, somewhat resembling measles. Typhoid fever lasts from three to six weeks. Typhus either abates or destroys the patient in fifteen days. In post mortem examinations of Typhoid cases we generally find morbid swelling or ulceration of Peyer's patches and the mesenteric glands; whilst these organs are in a normal state in Typhus.

Although I believe Typhoid fever is contagious to a slight extent, yet it is not half so much so as Typhus. It is probable that Typhoid fever is first excited by some atmospheric poison entering the circulation by the respiratory passages, and as soon as a case or two occurs, the pyrogenic poison is rapidly augmented by coming in contact with animal and vegetable effluvia, as cess pools, open drains, ditches, sewers, etc. I think that this is the most plausible supposition to account for the typhoid epidemics which so frequently prevail. Dr. Murchison, of London, seems to think that foul sewers, cess pools, etc., will of themselves excite the disease; but if so, how is it that so many cases arise in healthy, airy and salubrious districts? At this time, in this city, we find isolated cases in the most healthy situations, in large, well ventilated houses, and in subjects who have not been exposed to very noxious emanations. Again, if the effluvia arising from filthy sewers is capable alone of exciting the disease, why is it that it so often prevails in cold, frosty weather? The slow and gradual accession of the disease, accompanied with well marked premonitory

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symptoms, would lead us to judge that the exciting cause was some subtle toxic agent which enters the circulation, contaminates the blood, and gradually blunts and perverts nervous action and energy, and prostrates the physical powers, giving rise to all the phenomena called fever—this fever characterized by hot skin, quick pulse, mental disturbance, and very soon great asthenia. The pathological changes so generally observed in the fatal cases—the inflammation and ulceration of the glands of Peyer and the mesenteric glands—are, I conceive, but the consequences of the fever. Indeed, it is plausibly assumed by some that the diseased condition of the glands are the results of these excretory organs being employed in eliminating and excreting the *materies morbi* from the system. The diseased liver and spleen, sometimes observed, is not peculiar to this fever, but is much more frequently seen in other febrile diseases.

In Typhoid fever, then, I assume that we have—
First—Septicemia, or blood contamination;
Second—Quickened circulation and fever heat; and,
Third—General asthenia.

According to this view, the indications of cure are very obvious. In the first place we should endeavor as far as possible to counteract the effects, destroy the power, and eliminate the pyrogenic material from the system. Secondly, we should direct our efforts to tranquilize and equalize the circulation—guarding against local lesions and organic congestions; strive to subdue the fever heat and resist destructive change. Thirdly, we should husband all the resources of vitality in the patient; support the strength of body and mind, so as to obviate the tendency to death.

To fulfill the first indication, the internal administration of the bisulphite of soda, combined with diuretics, as digitalis, the fluid extract of cubebs, or uva ursi, spirits nitre, etc., will be found most advantageous. I give the bisulphite in from ten to twenty grains every two or three hours. Besides correcting

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the septicemia, neutralizing or destroying the blood poison, it is a powerful refrigerant and febrifuge, preventing the too rapid oxidation and organic destructive change in the system. The diuretics, I conceive, assist in eliminating the noxious materials, whether the *exciters* or *products* of the malady. In the first stages one or two small doses of some cholagogue cathartic may also be judiciously employed. I generally use a combination of blue mass, ipecac, and rhubarb; or hydrarg. cum magnesia; or the mild chloride, ipecac and assafœtida. If there is much diarrhœa, the hydrarg cum creta and assafœtida will be most appropriate; and I would here say that unless the diarrhœa is very profuse, we should not check it up abruptly; if the last named remedy fail, a few doses of the spiritus terebinthinæ, or of some of the mineral acids, will generally succeed in controlling the profluvia.

To fulfill the second indication in treatment, I think there is nothing so prompt and efficient as the "wet sheet;" but, like all powerful remedies, it requires care and judgment in its application. It should only be used in the early period of the disease, and in cases where the fever is ardent, and the patient not very weak and nervous; in these last cases, where there would be risk in using the wet sheet, frequent sponging with cold or tepid water will answer a good purpose.

To subdue the fever heat, calm and equalize the circulation, I also use the bisulphite of soda, combining it with digitalis. It is astonishing to witness the happy and tranquilizing influence of this combination; it has all of the good and none of the bad effects of Dr. Graves' opium and tartar emetic prescription. It allays the febrile excitement, soothes the mental hallucinations, and disposes to a calm and refreshing sleep. Free ventilation, strict cleanliness, changing the under clothes and bed clothes every day, and the free and frequent sponging the whole superficies of the patient will very materially assist in controlling the fever and counteracting its effects.

It will rarely be necessary to continue the use of the bisul-

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phite and digitalis more than six or seven days; after that time very little medicine will be required—a few drops of the spiritus terebenthinæ with infusion of carragheen or Lichen islandicus, if there is much gurgling or tympanites, will be found useful. Eight to twelve drops of the nitro hydrochloric, or dilute medicinal phosphoric acid in the above mentioned infusions every two, three or four hours, will in many cases greatly tend to fulfill the third indication—prevent asthenia. In the advanced stage, if there is much prostration, five drops of nitre and ten drops of hydrochloric acid, in an ounce of the infusion of columba root every three hours, is a most excellent tonic, and in my opinion tends to prevent structural lesion in the intestinal mucous follicles. The subnitrate of bismuth is also well adapted to accomplish the same purpose; it may be given in ten grain doses in a cup of infusion of carragheen, every three or four hours. The Iceland and the Irish moss make very excellent dietetic drinks in this disease, and are also very good vehicles in which to administer other remedies. The death tendency in this disease being asthenia, it is all important to sustain and revive the sinking powers of both body and mind; and with this view some good brandy and wine may be advantageously given along with the restoratives and tonics already mentioned. Of course a light but nutritious diet, given often, in small quantities, will also be necessary.

The above is a general outline of the remedial means used; but I wish it to be distinctly understood that I do not advocate precisely the same course of treatment in every epidemic of Typhoid fever, or even in every case of the same epidemic. One case may require the bisulphite and digitalis, and the cold sponging or wet sheet to be vigorously applied, whilst another will require them but a short time, and will require sustaining remedies throughout. In former years I often believed I cut short the disease by quinine and opium in large doses, whilst in this epidemic I imagined this abortive method would not succeed. I have tried it in a few cases, but was constrained to return to the means above set forth.

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MISSOURI DENTAL ASSOCIATION—SECOND ANNUAL MEETING.

SECOND DAY'S PROCEEDINGS.

The Association met pursuant to adjournment. The minutes of yesterday's proceedings were read and approved.

Dr. Homer Judd, the President, announced that the next business before the meeting would be the reading of essays; the first in order was by Dr. Eames, of St. Louis.

Dr. Eames said that the subject of his essay was "Mechanical Dentistry," and he hoped that the meeting would bear in mind the circumstance that his efforts were almost impromptu; he had written in a hurried manner, and the shortness of time at his disposal had given him no leisure for revisal, and it was there before him exactly as he had jotted it down.

He alluded, first, to the position of dentistry in former days when barbers were the only dentists, and traced the progress that had been made until mechanical dentistry had become a branch entirely distinct from surgical dentistry. He did not desire to speak of the mere making of artificial teeth, but principally of the appliances and modes by which teeth should be made, not in imitation of one set model, but as nearly as possible to represent the teeth of every nation. For every nation has its idiosyncrasy in teeth as in other things. Then he went on to suppose a case where a stranger should come into a studio and should demand a set of teeth, the natural ones having been extracted. Taste here was required. The nationality, the form of the face, the color of the eye, the shape of the lips, the outline of the jaws; all these should be consulted to give a natural appearance, which was the highest artistic effect that could be produced. Thus, in many cases where this taste was ignored, a ghastly, horrible effect had been brought about the face, especially the lower part seemed altogether false. The teeth were arranged much in the form of a circle, with the idea of plumping sunken cheeks; but this could not be done by crowding the mouth with teeth in a way foreign to nature, and which often interfered with mastication. Other teeth were again too long, and the muscles accordingly were constantly wearied by being never permitted to rest in a natural condition. If any one doubted this let him place a sheet of common paper between his teeth, and let it remain there for half an hour, and he will soon be convinced by the dreadful weariness of his jaws. He then concluded his able essay by pointing out the importance of using a variety of substances as one or other condition of patient might require it

Dr. John P. Hobler, of Carondelet, Mo, then read the following essay on "The Action of Acids on the Human Teeth:"

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The action of acids on the human teeth is a subject that has not been treated of or investigated very extensively in the dental profession, at least such investigations have not come under my observations. The subject itself is rather a peculiar one, but a subject which at times has occupied my attention, more or less, ever since I have been connected with the dental profession. But I can not say that I have come to any definite conclusion on the matter; hence all the remarks I may offer on it are simply my opinions founded in reason. The subject in question involved both chemistry and physiology. I am confident of the matter to a greater depth than I am capable of going. However, in the commencement, I will make the affirmation that, in my judgment, acids have a decided de-destructive tendency on the human teeth. As all learned dentists undoubtedly comprehend, the human teeth are organized in some four or five different species or classes, intimately and harmoniously combined with the several different temperaments, of which the human organism is endowed. Now, according to my observations in the matter, I have come to the conclusion that the sanguine and bilious temperament—where they predominate—are the temperaments which produce the best and most durable structure of teeth. And the lympathic and nervous temperaments, where they predominate, produce the least durable structure of teeth, and the ones which acids will operate on and destroy the easiest. The quality of teeth usually to be found with the sanguine and bilious temperaments are easily distinguished; they are of a beautiful white color, rather large and moderately long, when in perfect order, without spot or blemish, tinged with a cream color as they approach the gum; on the contrary, the physical appearance of teeth which are usually to be found with lympathic and nervous temperaments are somewhat variegate in appearance, from a chalky white, some with a bluish cast, together with others with a grayish or dark color, with no perceptible difference in color from the cutting edge of the tooth to gum, and all of these different developments of teeth, chemically, have their different component parts. According to Von Bibra and Berzelius, who agree well in their chemical analyzations, the first mentioned teeth have the least organic matter, dentine being sixty five per cent., and the enamel near ninety per cent. solid matter, which is phosphate of lime, and the other thirty five and ten per centum of fluate and carbonate of lime, magnesia, etc, The last mentioned teeth, both enamel and dentine, have about fifteen per cent. less phosphate of lime or solid substance, consequently they take in such a large per centage more of organic matter to constitute the structure; and therefore it stands to reason that they are naturally softer, and much more easily operated

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upon by the several different corrosive agents, such as carbonic acid, citric, tartaric, sulphuric, acetic, and many other acids which animal and vegetable food abound with, and on which the human race subsists. Indeed, some of those corrosive agents are of so pungent and powerful a nature that the very best quality of teeth can not escape. But I am under the opinion that those who have the first quality of teeth mentioned, and are constitutionally healthy, and will keep their teeth perfectly clean of all organic matter that may adhere to them whilst eating, that such a course would preserve their teeth to the end of life almost perfectly sound. But there is not one in a hundred does it, and taking into consideration the coarse and cross natures of the majority of the human race in this unprogressed stage of existence, it is hardly to be expected of them; however unprogressed in point of cleanliness in this regard, they are, many of them, careful to keep other parts of their person clean, but their mouths, the very part they should be quite particular with through various causes, will become more offensive than a charnel house. Then I hold, as a scientific fact, the higher the organic quality, and the more sublimated and blended the temperaments, the cleanlier and more refined the individual. But it does not follow that those that have the finest organizations will have the best teeth; but, on the contrary, some of those that have the grossest organizations have the very best of teeth. The natural destructiveness of acids on teeth (I mean the organic acids which are in the food we consume) is doubted by some persons. They offer the argument that there is but little, if any, free acids to be found in animal and vegetable food, which is partly admissable. Carbonic acid, according to Liebig, is never found in a free state in animal and vegetable food. Then comes the very natural question, how can carbonic acid have such a destructive tendency on the human teeth? In my opinion the answer is plain and simple to any person who pretends to any chemical knowledge. Carbonic acid is only set free in a state of "*eremacauses* or *decompostion.*" Now every particle of food, either animal or vegetable, contains a vast amount of carbon; especially fat matter, starch; wines or beer containing nearly ninety per cent. of carbon, but no nitrogen, which the system uses to create combustion, or heat, and also fibrine, albumen and calcine, which are the nitrogenized substances which produce the blood, thence all tissues, muscles, etc., etc, and which substance is found in nearly all animal and vegetable food, which also contains, according to Berzelius from fifty to sixty per cent. of carbon, together with oxygen, hydrogen, sulphur and phosphorus. When food is masticated between the teeth, the fibrine, albumen and calcine form a glutinous material which contain, as above stated, such a

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quantity of carbon, together with other carbonaceous substance, from fat, sugar, etc., closely adheres between and all around the necks of the teeth, and even up under the gums, and remain there, in many instances, until a complete decomposition takes place; the oxygen in the food and the oxygen of the atmosphere, of which we are continually breathing, coalesces and forms with the carbon; the consequence is a combustion or decomposition takes place, and the result is, that free carbonic acid is generated and acts, in my opinion, directly on the teeth, and I am tolerably confident that it is one of the primary causes of caries in the human teeth. The sulphur and phosphorus in the residue, during the process of decomposition, if not generated into free acid, they form with the hydrogen, and does its injury in the shape of sulphuretted hydrogen and phosphoretted hydrogen, which is almost as equally destructive. This mode of reasoning is objected to by some persons, and they will offer an instance as to demonstration of some filthy person who, perhaps, had never made the acquaintance of a toothpick or brush, and whose mouth has never been cleansed for twenty years or more, where decomposition has been going on in the residue of food remaining around the teeth, in its completest sense, until innumerable animalculæ has been developed in such size and quantity that they are almost perceptible to the eye, and still, when the tartar and filth has been cleansed away, there are found almost perfectly sound teeth. There, says the objector, your logic all falls to the ground; and he will proceed from that instance, to adduce the argument that a filthy mouth, all glued around with tobacco juice, occasionally washed with a glass of beer, is a preservative of teeth. But really, to a thinking mind, such instances prove no more than this: that the God of Nature has given them the very best quality of teeth, and, with all their neglect and abuse of them, they can not destroy them; for it is a well known scientific fact, that carbon and oxygen, in combustion, form the destroying elements to all animal and vegetable matter that no longer contain the life principle, and undoubtedly, at times, destroy life itself. Organic acids, in animal and vegetable matter, are also rarely found in a perfectly free state, but in combination with them several bases, which is soda, potassium, lime magnesia, and so on. For instance, we have in the orange lemon and pineapple, citric acid; in the grape, peach and strawberry, tartaric acid; in all cereals, mustard, cabbage, and so on, we have sulphuric and phosphoric acid, and we have the elements of ascetic acid in all vegetables used for food, and just enough free acid of nearly all mentioned to be a vast amount of injury to the human teeth. As for a simple demonstration of the truth of what I advance, perhaps every one has at times heard children, and even grown persons, after

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eating grapes, apples, peaches, etc., make the very common remark that their teeth are on an edge, which is nothing more nor less than these acids acting on the enamel of the teeth until they have become so softened and so painful as to exclude eating for some time; and it is nevertheless true that the very deadliest acids are to be found in the human organism, and, according to chemists, always remain there. For instance, in the gastric juice of the stomach there is found muriatic acid, free, and in the saliva of the mouth is found chloride of potassium, and also a trace of muriatic acid. But it is reasonable to suppose that it is placed there as a constituent part of the corporeal system, by the great Supreme Cause for a wise and special purpose—that is, to assist in salivation and digestion. And such acids are really hurtful only when they become vitiated by disease, or brought in contact with other agents, in the consumption of food. Argentine or other amalgam fillings, in my opinion, are another source causing vitiated agents to act on the teeth immediately in contact with such fillings in certain individuals. The zinc and silver in the amalgam, together with the muriatic acid which may come from the stomach and mouth, forms a species of electrical battery, very small ones it is true, but sufficient to generate electrical matter, and with the small quantity of remaining mercury in the amalgam, and the chloride of potassium in the saliva, are generated chemical agents which are very disastrous to some teeth; do not, however, understand me to reject amalgam altogether, although I have banished it from my practice; there are some individuals who are so constituted that the chemical effects generated by amalgam fillings have, perhaps, a preservative nature on their teeth; hence when a patient presents himself, and calls for such work, it remains with the scientific judgment of the dentist to decide in his own mind whether that patient has teeth of such organic quality that it will warrant him to use the material in question. Many of the dentrifices sold and distributed among the people by the numerous venders of quack nostrums, in my opinion, are another peculiar source of disease of the mouth and decay of the teeth. They are outwardly so nicely prepared as to deceive the eye, and exquisitely flavored, so as to have a rather desirable taste and smell; and these pretended merits are heralded forth to the world in the daily journals under the high-sounding names of "Sozodont," "Balm of a Thousand Flowers," and so on, all calculated to deceive the public. Where such preparations are chemically analyzed and their constituent parts are determined, will be found that the greater portion of such preparations are composed, first, of some harmless materials expressly to give bulk; if a powder, it will be perhaps loaf sugar and honey and a little crete; if a liquid wash, it probably will

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be milk of the cocoanut, juice of the plaintain, or a distillation of rose water. Then, there are certain kinds of acids which have a tendency to whiten the teeth, and others that will cause them to darken. Now, sulphuric, muriatic, nitric, phosphoric, and some other of those searching and powerful acids, are the ones that have that bleaching power, and when introduced into such dentrifices it is under certain a lulterations, and as a matter of course, in sma l quantities, that it may not be perceptible to the taste and have no immediate perceptible bad effect. Such dentrifices have in many instances the desired effect of keeping the teeth white for some time, when well applied; at the same time, however, a softening process of the enamel, caused by the action of the acid, sets in and will eventually destroy them. A compound of pumic estone, orris root, crete, well pulverized, used with cold water simply, is about the only safe dentrifice now in use. Charcoal is another famous dentifrice with some. The truth is, that where charcoal is brought in contact with animal or vegetable matter it has a preservative nature, except in such instances where the condition of the surroundings has a tendency to operate or act on the charcoal, which as we all know is pure carbon; just so its destructive tendency on some teeth, as I have observed. There are some so constituted that when charcoal is applied to the teeth, that the peculiar and powerful secretions of the mouth are such that they act on the charcoal, and thereby vitiated agents are germinated, which produce a gradual softening, and finally will destroy them.

Dr. A. C. Griggs, of Warrensburg, Mo., next read the following report of a case of Necrosis of the Lower Maxillary Jaw.

I have, at the request of Dr. H. E. Peebles, of this city, and Dr. M. McCoy, of Boonville, prepared this paper—a simple statement of a case of necrosis of the inferior maxilla and its treatment. The patient (a boy about eleven or twelve years of age) was brought to my office by his father during the latter part of last summer to have a tooth extracted—the first inferior molar on the right. The family physician, not having examined his mouth, supposed its deceased condition caused by said tooth being abscessed, and sent him to me. On examination I pronounced it to be a case of necrosis, though to what extent I could not say, as the patient was so much excited by fear that I could not quiet him to make a thorough examination. I advised the immediate removal of the diseased bone, as I thought the little fellow's constitution too sorely tried by the fetid sanies constantly taken into the stomach. He was very much emaciated, and face swollen; is the reason that I did not think it proper to wait the slower process of exfoliation. The disease, I think, had a two fold cause—the primary or irritating cause I think was some preparation of mercury given during a very

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severe attack of cerebro spinal meningitis, and the secondary or non-resistant cause was the constitutional debility or anaemia following the disease or during convalescence, the blood being hardly able to furnish nutrition, and not able to repel the attack of disease. The location of the disease I think was caused indirectly by a decayed tooth, the first right inferior molar coronal cavity pulp exposed causing him to masticate his food on the left side of the mouth, thus for want of cleanliness causing salivary calculus to collect around the necks of the teeth on the right, causing a chronic form of inflammation, thus inviting disease. I thought him of a scrofulous diathesis. The father refused to have the operation performed, but came again August 11th, to have the bone removed, and gave him into my hands for treatment. I found, on second examination, the gum had separated from the bone and exfoliation had taken place posteriorily, and that the necrosed portion comprised the alvolar processes of the five posterior teeth from the lateral incisor, and the whole of the inferior maxilla from the base of the ramus anteriorly to the lateral incisor above and to the symphysis below. (The dens sapientia escaped by being in the ramus.) The face was very much swollen and patient more emaciated, with large ulcer just back of the symphysis. I commenced the operation by dissecting the gum from over the anterior extremity of the bone. I then grasped it with a pair of curve peaked forceps, broke the anterior attachment as I would the attachment of a tooth; raised the posterior extremity; pressed it backward toward the soft palate until the long point of bone under the lateral could be raised above it, when I removed the bone from the mouth. The reason why I broke the attachment was that exfoliation had gone so far that I thought the bone weaker at the junction of the healthy and necrosed bone than any other place, and that if a small portion should be left it would come away in a short time. After the hemorrhage ceased, so as to permit it, I touched the parts with a solution of nitrate of silver; prescribed plenty of nutritious diet, and, as soon as practicable, plenty of exercise in the fresh air, and sent him to a physician for a tonic; afterward prescribed tincture of iodine, undiluted, to paint the parts, in place of the solution of nitrate of silver, and a solution of chlorate of potass as a mouth wash. Fourteen or fifteen days afterward the swelling had subsided, and the ulcer was healing rapidly and general health much improved. Now, eight or nine months after the operation, new bone has formed, granulations having taken place, and with the exception of a want of teeth on that side of the mouth and that the new bone describes a little larger arch than the old one, you can not detect the loss. Hoping, gentlemen, that the case described may have had some interest for you, I make no apology for writing it.

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Several essays were presented and referred, after which the Association adjourned, until 2 P. M.

AFTERNOON SESSION.

Association met pursuant to adjournment.

Dr. Peebles then read a very interesting paper on Dental Ethics. After which the Association adjourned until to-morrow morning.

THIRD DAY'S PROCEEDINGS.

The Association met pursuant to adjourment. The minutes of yesterday's proceeding were read and approved. The session was devoted to the general discussion of the various essays previously presented, which was continued during the remainder of the session. The minutes were then read and adopted, after which the Association adjourned *sine die*.

CHLOROFORM IN DYING.

By Dr. Joseph Buller, Physician to the Royal South Hants Infirmary.

So many cases where most attention is expected, are those where disease can only be palliated, that palliation becomes a very important part of our duties. Few of this large class are more distressing than when extreme restlessness and sleeplessness accompany the exhaustion of the last days or weeks of the life of the very aged, especially when (as is often the case) the mental consciousness is still active, and the failure of power in the vital organs is actually felt, with none of that physical courage to bear the suffering which the same patients had when younger and stronger. That true health, or at least that tenacity of life on which its long duration depended, keeps them alive and suffering, and conscious of this suffering, for a length of time tedious to themselves and often most wearisome to those who watch over them, and who look (so often in vain) to medical aid for alleviation, which would relieve themselves as well as the patient.

Small opiates, which at an earlier stage may have been useful, at this later one often aggravate the distress instead of soothing it; and it is in this condition that the cautious inhalation of chloroform is a great boon.

A lady, aged 82, had been for some years confined to her bed and sofa, and, without any appreciable bodily disease, was now gradually sinking. For some years she had suffered mentally from depression taking a religious form as to her soul's safety,

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and so persistently that it seemed like a delusion, from the powers of the brain becoming enfeebled. But she had a good appetite; could employ herself much with finger-work; and, though confined to her room, and much in bed, had a very fair amount of bodily health. Some months before her death the delusions were attended with more excitement and irritability; she slept less, and often not at all; and her appetite gradually declined. Small doses of liquor opii sedativus (from five to ten drops) at night soothed her at first; but, as her strength diminished, the same doses excited her brain, and she lay in a very distressing state of restlessness and prostration, exacting constant attention from those watching her. She lost her appetite and power for solid food, and could only take small quantities of beef tea and brandy and water. In this painful condition, about five weeks before her death, I recommended the inhalation of twenty drops of chloroform at a time at bedtime, on a handkerchief; having first given it to her myself, to see whether it soothed or was agreeable to her, or otherwise; and it was found that this prevented the exciting effects of the liquor opii sedativus until its narcotism exhibited itself, and by both together she had quieter nights. But, after a few days, the opiate was discontinued, as it excited, and chloroform alone used, with so pleasant a result to the patient herself, that she frequently, by a sign, indicated her wish to inhale it, and was partially for a month, and almost wholly for five days before death kept almost constantly under its moderate influence. The effect was to quiet the delusions, to make her mind peaceful and happy, and also to raise the pulse and respiration. Her daughter observed this, and I found it to be the case. When she was so weak that the pulse could only be felt with difficulty, a short inhalation of chloroform rendered it distinctly perceptible, and the respiration became slower and more natural.

At my request, one of this patient's daughters stated in writing their observations on chloroform in their mother's case, as the inhalation was carried out by these ladies and a middle-aged, sensible attendant.

"A pleasing feature in her case," writes the daughter, "was that chloroform never made her really insensible; it only lulled her pain, gently calmed her spirits, and frequently, but not always, sent her to sleep for a few minutes, when she would awake quite herself, with a perfectly natural look and manner, and perhaps ask how long she had been asleep; and this after so many months of fearful excitement. We felt nervously anxious at first of giving her too much, and we never omitted to watch the pulse. One morning, after breakfast—a time when she was generally low—I had given her the usual dose of

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brandy and water, when she said, 'I do not like the brandy as I did; give me some of the nice stuff to smell' (meaning chloroform). I did so with some anxiety, as she was so low, when, to my great relief, the pulse gradually rose. I continued giving small doses at short intervals, when it very soon regained its usual strength. After this, we constantly noticed the same thing, and we no longer hesitated to give her as much as she craved, especially as the breathing powers were much relieved and became more free, and the countenance took a peaceful and happy expression, such as we had rarely seen in her of late years. To our minds, this craving was an instinct of nature. She had for a long time been asking for something to smell, and nothing we could get for her seemed what she wanted; but, when she had once felt the effects of the chloroform she never asked for anything else, but for that constantly.

"My mother used just under a quart. The greater part was given during the last week or ten days of her life; but the night before she died she inhaled nearly half a pint. Still she was conscious till within six or eight hours of her death; at that time, we believe, she became quite insensible."

Statements of this sort, by intelligent friends, who watch effects and describe them without any bias, are especially valuable.

This statement is satisfactory as to chloform soothing the mind; for, under its mild influence, the patient was more like herself in the most tranquil period of her life, and altogether different from that excited and restless or depressed condition which, as her bodily powers failed, added so much to her sufferings. It is also valuable in showing that, in certain weak states of body, chloroform strengthens the pulse and respiration—a fact often observed by those who watch the pulses of patients undergoing operations under chloroform. If the dying state be reckoned by the respiration becoming quicker and the pulse failing, this patient took five days in dying; and as the chloroform so obviously increased the strength of the pulse and breathing, it rather prolonged than shortened life. Indeed, it seemed to act like the tonic stimulus of food or wine in a stronger bodily condition, and at a time when neither of these could be taken.

This was one of the few cases in which (no *post mortem* examination having been made) the only return of the cause of death was the decay of old age. The lungs, heart, digestive organs, and kidneys, were without disease; and the delusions were attended with no paralysis or loss of cerebral or nerve power.

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In the next case, although the patient was 75 years of age, and had been breaking for two years, he did not die of old age, but was greatly worn down by pain. He was well known in this county as a sportsman. He had hunted, shot and fished from his youth, and still shot all the season; indeed, his last illness was brought on by exposure to cold in shooting, beginning by severe catarrh, and followed by violent pain of the left side of his face and scalp and ear. The pain resisted quinine and other neuralgic remedies, and its obstinacy was eventually explained. He had been deaf for some time; but increased deafness of the ear, with tenderness and some fulness over the mastoid process of the left temporal bone, indicated disease of the petrous portion. He was a man who had been able to bear pain unflinchingly. He was organized for a sportsman—tall, lean, muscular, no fat, large-chested, and bony. In hunting, he had at various times broken or dislocated several of his long bones; and his brother told me he had seen seven men with pulleys trying to reduce his dislocated shoulder, whilst he uttered no complaint; and the surgeon said (in that heroic age of remedies) they could not make him faint. But this pain was so excruciating that it wore him down. It was always there, but at times in acute paroxysms. He had chronic cough and expectoration from bronchitis, and latterly passed much pus from the bladder, giving suspicion of pyæmia, with complete loss of appetite and failing strength. He could never in his whole life take opium, as it excited him; and when he had it now, it produced no relief, but distressing sensations and sickness. In this condition, and about three weeks before his death, when all hopes of his recovery had passed, I recommended him to inhale chloroform. It relieved the pain and gave him bodily comfort. The effect, he said, was like champagne, when he could drink a bottle of it. As he became weaker, he increased the quantity of it, and kept himself much under its influence. In the last five days, sixty-three ounces of chloroform were used. He was a strong willed man who would do as he liked; and, having once felt the agreeable relief which chloroform gave him, he compelled his niece (who watched him) and his servant to wet his handkerchief with it as often as he called for it. It rendered his last days bearable, and indeed comfortable, instead of a period of excruciating pain. There was no *post-mortem* opportunity of seeing the disease which produced this great suffering; but, as the mastoid process was tender on pressure and swollen, and the skin somewhat red, with complete deafness, it was evidently from diseased bone. It recalled a case I saw in February, 1863, of a man who seemed literally to die of pain referred to the sacrum and coccyx, which came on after exposure to wet three months before admission

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into the South Hants Infirmary; and by no remedies could the pain be removed. Subcutaneous injections of morphine, chloroform veratrine, aconitine; externally, blisters, with morphia, hot hip-baths, were thoroughly tried; externally and internally, opium, chlorodyne, cannabis indica, quinine, iodide of potash, and guaiacum. Short relief was given by relays of four leeches, but this only for a short time; and the poor fellow was actually worn down, and died from this pain. My friend, Professor Aitken, of Netley, kindly examined minutely a portion of the sacrum and coccyx I sent him, and the cause was discovered to be vascular tumours in the bony structure. He thus described them. "In both pieces of bone, after the flesh had been removed, vascular tumours are seen. One of them is modulated, and of the circumference of a shilling; the other less. They are embedded in the spongy bone, and one at least presses upon the nerves as they make their exit through the sacral foramina. I am of opinion that more of these little tumours have existed in the substance of the sacral bones; pehaps also in the spongy parts of the vertebræ. They seem to me to be of a varicose nature, and connected with the venous system, rather than the arterial."

This case, as the former, came on after exposure to cold. He had lived very freely, occasionally drinking very hard; and, though only sixty-two, was a worn-out man. He had Bright's kidneys.

It did not occur to me to make him inhale chloroform, as I should do now; for it was one of the most distressing diseases I ever watched, as nothing alleviated his constant pain, and (as the cause showed) nothing but such an anæsthetic as inhaled chloroform would have destroyed pain from tumours pressing on sensitive nerves amongst bone.

The only other case in which I have given chloroform to the dying was that of a lady, many years ago, who was subject to very painful attacks of gall-stones. Chloroform inhaled was the only relief. After several gall-stones had passed, at varying intervals of weeks and months, one attack came in which the pain never ceased, and she died after many days, deeply jaundiced. Her son, who was studying medicine, administered the chloroform. "It had the effect," he writes; "of very quickly lulling the pain; and the moment she was out of pain, I desisted. At such a moment, she was concious of my presence,-sometimes not. The amount of chloroform used altogether was very large indeed." I found, *post-mortem*, a gall-stone of the size of a small marble, impacted in the common duct, two inches from the duodenum. The liver was very large and light yellow; and there was an ovarian tumour, with hair and bones in it, the pressure of which on the crural nerves during life had

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caused much suffering. She had been an invalid for a long time. In this case, also, when the patient had felt the relief from chloroform, she would have it given to her. I have seen one patient die from a gall-stone rupturing the duct; and the agony is such, that any amount of chloroform which gave ease was justifiable; so would it be in cases of rupture of the stomach and intestines. But, in these cases, it must be given as long as life exists; and, when once its relief is experienced, we may be sure the patient will insist on its continuance to the fatal end.

I look back many years with regret to a night during the whole of which a lady of the most sensitive nervous organization died in inconceivable suffering. Dr. Baillie said to her in her girlhood, "You will have a great deal to suffer in your life, my dear, but don't talk about it;" and his prescience was too true. For many years before her death, she constantly suffered abdominal pain, restlessness, and general distress; and latterly the cause of this was explained by the discovery of an abdominal tumour. This suddenly burst internally; and, after twenty-four hours of what was literally horrible torment, she died. Having watched the case for years, I knew she must die; but, from the weakness of her heart, I feared chloroform might extinguish life at once. With my present experience in chloroform, I should have given it freely, with the belief that the chances would be in favor of its rather prolonging life, which was shortened by the pain; and opium gave no relief.

The rule, in advising chloroform in these cases, is to judge by its immediate effects. In these instances, it was so agreeable, without any after discomfort, that, when once given, the patient insisted on its continuance; and this is our guide.

The inhalation had better first be tried by the medical attendant himself; twenty minims being dropped on a handkerchief, and held before the mouth and nose at such a distance as to admit air, but not far off; and the patient directed to breathe naturally. If it irritate or nauseate, or be in any way repugnant, these are probably unfit cases. If it soothe, and the patient ask for it again, it may be very safely entrusted to a careful nurse or female member of the family, giving clear directions that at first no more than twenty minims should be poured on a handkerchief at a time, and held at a certain distance; and that the breathing and pulse should be watched. A second supply should not be used, if the first has produced its effect.

There is one question which must not be avoided, and that is the ethical one.

It is reported that Queen Maria Theresa said, in dying, "Give me no opiates; I would meet my God awake." And we

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meet with similar instances, where the patient sometimes, and more often his friends, think it is wrong, in a religious point of view, to give narcotics in dying. But it is not recommended for these "great hearts" to use chloroform, but for the weak ones, who suffer so terrbly from the mental and bodily exaustion of dying. The best answer to those who doubt its propriety on religious grounds, is in these letters from the relatives of two of these patients. One writes:

"For my mother, chloroform seemed to clear her intellect, and enabled her to speak with thankfulness and hope regarding her eternal interests, as she had not done for so long; and I cannot but think that more precise knowledge of its effects in individual cases would dissipate those anxious thoughts of friends on this, as on other points, to the benefit of all concerned."

The next letter is from the lady who watched the patient, to her father.

"I am quite aware of your dislike to any thing like a sedative being used when a human being is passing from time to eternity. The free use of chloroform in my uncle's case was unavoidable. After once inhaling it, he would have it. But, had it been denied him in his last hours, the agony which he was suffering was so excruciating that consciousness as to everything but that was gone. Chloroform stupifies for the time; but when its effects are past, the faculties are alive again, and the person able to attend to other things. Were I in attendance upon a dying person, I should prefer his having temporary relief from pain; as, if he had not, he would not, humanly speaking, be more able to attend to the things which concern his soul's salvation, than if he had not obtained relief from chloroform; or I would rather say, not so capable."

These letters are satisfactory answers to those who, in ease themselves, theoretically object to soothing others in the saddest form of distress: for they show that chloroform thus administered, by relieving restlessness and pain, renders the patient, in intervals of ease, more capable of normal thought and feeling.—*British Medical Journal.*

PHTHISIS IN PERU.

On the sea-coast of Peru, as on that of the Gulf of Mexico, incipient tubercular phthisis is one of the commonest of pulmonary affections. From time immemorial, however, it has been known to the natives that a removal of phthisical pa-

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tients, even in the stage of well-marked ulceration and cavities in the lungs, to the inland valley of Jauja, at a height of 10,000 feet above the sea, was followed by an almost invariable suspension of the disease—a fact which is quite corroborated by the practice of physicians at the present time. From the statistics of Dr. Fuentes, of Lima, published in 1858, it appears that nearly 80 per cent. of the cases of phthisis sent to the Jauja valley are cured. So forcibly has this fact been brought before the Peruvian Government, that it has established in this valley a military hospital for consumptive patients, and especially for native Indian soldiers, who, in the capital are singularly prone to phthisis. Indeed, of the whole annual mortality of Lima, no less than twenty-two and twenty-nine thirty-ninths per cent. is attributed by Dr. Fuentes to this disease. So that, as Dr. Smith remarks, we must admit that the Peruvian physicians have abundant opportunity of testing the various modes of treating it; and the unanimous opinion at which they have arrived as to its curability by a removal of the patient to the Jauja valley, leaves no doubt as to the well-founded nature of the reputation which that district enjoys. How much of this curative power may be due to the moral influence exerted by its scenery and associations, it would be difficult to say; but a nearer approach to Elysian felicity than the lives which its population are described as leading, it would be probably impossible to find in any less-favored land. The harvest being home, we are told, the whole rural population rest from their agricultural labors for eight months in the year, which they give up entirely to amusements and feasting, trusting to the rain of heaven during the other four months of the year to fertilize their land and yield them more food than they require. Surely Dr. Johnson must have had this valley in his eye when he wrote his pleasing fiction of "Rasselas," for no other of which we have ever heard realizes the physical conditions under which the Prince of Abyssinia sought for the perfection of human happiness. And we may mention for the benefit of such of our readers who, as valetudinarians or philosophers, may feel an interest in knowing more about this charming region than we are able to tell them, that if the project of running regular steamers up the Amazon from Para, 2500 miles from its mouth, which has just been started by an American company, becomes an established fact, they will be able to transport themselves into it, almost without changing vessels, after a voyage which, though long, is not tedious nor debilitating, and which will carry them through some of the most magnificent scenery that the world can produce—*British and Foreign Medico-Chirurgical Review.*

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PARACENTESIS PERICARDII.

This rare operation has recently been done at the Leeds Infirmary, with complete success, under the direction of Dr. Clifford Allbutt. We learn from the case, as reported in the London *Medical Times and Gazette*, that the patient, a man aged 26, was suffering from severe acute rheumatism, both muscular and arthritic. There was a large effusion within the pericardium, accompanied by acute pain in the region of the heart.

"On September 19, about 11.30, P. M., Dr. Allbutt was hastily summoned to see the patient, who was found sitting up in bed, with his elbows on his knees, struggling for breath. He was covered with a cold copious sweat. The area of pericardial dullness was found to be considerably increased, occupying nearly the whole of the left chest in front. There was perfect resonance all over the left lung behind. The patient was clearly at the point of death, and Dr. Allbutt determined at once to ask Mr. Wheelhouse to tap the pericardium. Mr. Wheelhouse was, therefore, called in to see the patient.

"The extent of the pericardial dullness was now accurately defined, and the probable position of the apex of the left ventricle and of the auricle was as far as possible ascertained. Mr. Wheelhouse determined to open the sac half an inch from the sternum on the left side and opposite the upper margin of the costal cartilage of the fifth rib. He passed in a fine trocar, inclining it slightly upwards and inwards, so as to enter, if possible, opposite the center of the left ventricle. He pushed it onwards until he could distinctly feel the movements of the heart with the instrument; and then, sheathing the point, he pushed the canula well up to the heart until he could both feel and see the impulse. The trocar was then wholly withdrawn, and the fluid allowed to escape. This it did in a steady stream at first, which soon subsided into a saltatory flow coincident with the heart's contractions. The fluid consisted of a pale-pink coagulable serum. On the whole, about two and a half or three ounces escaped. During the operation the patient gradually obtained relief, and after the canula was withdrawn, the bed-rest was removed, and he was able to lie down. The breathing was now only 36 per minute, and he was able to speak a few words, and express that he felt relieved. The pulse had lost its rapid and struggling character, and could easily be counted, its number being about 110. The area of dullness was very decidedly lessened, but it was not thought well to tease the patient again with a minute examination."

The patient was discharged cured on the 13th of October, with slight pericardial dullness and a loud systolic souffle over the apex.—*Boston Medical and Surgical Journal.*

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HOMŒOPATHY IN FRANCE.

From a recent discussion which took place at the Sociètè Mèdicale Homèopathique de France, it would seem that some of the leading homœopathists are abandoning not only the practice of infinitesimal doses (which, indeed, they have pretty generally done long since), but even their theoretical defense. M. Curie, son to the well-known homœopathist of that name, having made the declaration in the Society that for his part he did not believe in the action of infinitesimal doses—or, at the very least, had his doubts respecting them—M. Lèon Simon asked in some dismay, "What, then, is to become of homœopathic tradition? Are we to burn the books of our predecessors, and close our pharmacies? Are we to admit that we have been hitherto either charlatans or dupes? This is no question of mere doctrine, but one of fact, for we can not have been following an erroneous course for sixty years without exhibiting complicity or stupidity." "Not so," replied M. Curie; "I can very well imagine the properties which may be developed in medicinal agents by infinitesimising their division, but practically I have not met with them, and I attribute the good which results from their employment to the prevention of the perturbating action of allopathic procedures and leaving nature to her unimpeded action. What proof have you that your doses have affected cures, in the utter absence there is of all means of exact clinical comparison in the cases under your treatment?" M. Cretin observed that M. Curie did not deny the virtue of these infinitesimal doses, but remained under the influence of scientific doubt, ready to give way to conviction on the production of exact facts. For his own part, if, while accepting the law of *similia similibus*, he is to be expected to embrace all the contradictory opinions of Hahnemann and his followers, he must decline continuing to be a member of the Society. M. Cretin commented on the disreputable character of much of homœopathic literature, and on the impossibility of getting the curative agencies so abundantly boasted of in books demonstrated in practice.—*Medical Times and Gazette.*

Rupture of the Aorta —After careful investigation and analyses of this rare accident, Dr. Chauvel concludes, that the lesion is most frequent in men, and between the ages of 30 and 60. Its most common seat is in the pericardiac portion of the vessel, and is found usually in a transverse direction. Its extent is very variable; involving sometimes nearly the circumference of the artery, then again scarcely visible.

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JOBERT (DE LAMBALLE), OF PARIS.

The Paris *Gazette Medicale*, of May 4th, reports the recent decease of this eminent surgeon. His obsequies, which took place the Friday preceding, at the church of the "Madeleine," were attended with great pomp, and an immense concourse of persons. Marshal Vaillant represented the presence of the Emperor. The Imperial Academy of Sciences and the Academy of Medicine testified by the attendance of their respective presidents and members the high and honored position which Jobert occupied as a member of these scientific institutions. The Paris School of Medicine was represented by a deputation of professors and assistant professors in their robes, headed by the Dean of the Faculty. Several funeral discourses were pronounced over the corpse;—Dr. Conneau, first physician to the Emperor, spoke in the name of his Majesty; M. Gosselin in the name of the Paris School of Medicine; M. Legouest expressed the feelings of the Academy of Medicine; and M. Arnal those of the personal friends of Jobert. The sad misfortune which overtook this great and distinguished man before his death, is known to all. In the wreck of his intelligence were explained those eccentricities which frequently characterized his private life. He commenced his medical career in 1819, from an humble origin, with an imperfect education, and in extreme indigence; with an intellect brilliant and ardent, dominated by an inflexible will and fixedness of purpose in the pursuit of distinction, and the attainment of excellence in his profession. Jobert had many warm friends, and some bitter personal enemies. By his irrisistible will and unremitting application, he attained to distinction, and the possession of a most ample fortune. As surgeon to the Emperor; member of the Imperial Academy of the Sciences; of the Academy of Medicine; member of the Institute of France; commander of the Legion of Honor; professor of the School of Medicine at Paris, Jobert was sufficiently entitled to the mortuary pomp and splendor which commemorated the respect of the French nation, as evinced through its high dignitaries and scientific bodies. The application of his physiological researches to wounds of the intestines by the immediate contact of their serous surfaces, originating the extensively adopted procedure called suture by "invagination;" his important advances in the treatment of vesico-vaginal fistula by the method called that of "glissement," though far surpassed by the inventive genius of American surgery; his numerous publications, and his brilliant operative skill; these are distinctions which claim for Jobert the regard of all medical men.—*The Medical Record.*

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THE MEDICAL REPORTER.

ST. LOUIS, JULY 1 1867.

The Iowa State Medical Society.—Met in the City of Davenport, on May 22, 1867. The President, Dr. J. W. H. Baker, presiding.

There was a large attendance of members, and much interesting matter presented for discussion.

Dr. Richardson, from the Committee on Meteorology and Medical Topography, presented a very interesting report.

Interesting papers were also presented by Drs. Hughes, Iles, Whinnery, Harvey, Maxwell and others, all of which were ably discussed by the Society.

The following were elected officers for the ensuing year:

PRESIDENT—Dr. William Watson, of Dubuque.

VICE PRESIDENT—Dr. Edward Whinery, of Fort Madison.

RECORDING SECRETARY—Dr. A. G. Field, of Des Moines.

TREASURER—Dr. M. B. Cochran, of Davenport.

CORRESPONDING SECRETARY—Dr. E. J. B. Statler, of Marshalltown.

BOARD OF CENSORS—Dr. A. S. Maxwell, of Davenport; Dr. G. L. Garhart, of Mt. Vernon; Dr. J. Williamson, of Ottumwa; Dr. A. M. Carpenter, of Keokuk; Dr. Fred. Lloyd, of Iowa City.

The next meeting of the Society will be held on the first Wednesday, in February, 1868, at the City of Des Moines.

State Medical Society of Kentucky.—At a meeting of certain members of this Society, held in Louisville, April 2d last, in accordance with an invitation from the College of Physicians and Surgeons, it was determined to revive their organization. A number of committees were appointed to report at the next annual meeting; and, after transacting a considerable amount of business, the meeting adjourned to meet at Danville on the first Tuesday in April, 1868.

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Morgan County Medical Society.—At the meeting of the above Society, on June 13th, Dr. Askew related the history of two cases of phthisis, and their successful treatment with cod liver oil. The patients are both living and are in apparent good health.

Dr. Prince confirmed the opinion of the beneficial results of cod liver oil in phthisis, considering it a curative as well as a preventive agent, and gave it the preference over the alcoholic treatment.

Dr. Prince had been called in consultation in one of the cases mentioned, and was requested by the president to state some of the signs and symptoms which had resulted in the diagnosis.

Quite a discussion arose as to whether there was pain during the early stages of tuberculosis in the parenchyma of the lungs, and whether pain could arise from inflammation of that tissue.

The president stated that he had never found pain in this disease in his practice, and that the lungs were too insensible an organ to produce it.

Dr. Edgar considered the diagnosis of phthisis in the earlier stage very uncertain, and mentioned as a valuable means for diagnosis the comparative elevation of the scapula on a deep inhalation by the patient; that in the first stages of phthisis the deposit of tubercular matter at the apex of the lungs, produced similar physical signs, as chronic bronchitis, extending by continuity to the adjoining parenchyma, rendering the lungs impervious and flat, or dull on percussion; that the principal diagnostic symptom was the existence or absence of pain, but little or no pain attending the primary deposit of tubercles, whereas pain did accompany the other condition to a greater extent.

Dr. Edgar also read an essay on "Veratrum Viride," giving some valuable accounts of its history, and therapeutic properties as an artificial sedative, the doses, its different action, when used by the mouth, and as a subcutaneous injection. The reason that it is not more used, is, that Dr. Norwood, of South Carolina, who brought it into general use, recommended it unwisely as an

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emetic, and in some diseases in which it is not applicable. The U.S. Dispensatory, the most popular standard work, recommends its use in over-doses, which produces often harm, and anxiety both to patient and physician.

The therapeutic properties of Veratrum Viride gave rise to the description of a new instrument, the Sphygmograph, or pulse-writer, and its value as a diagnostic agent in the action of medicine on the pulse—for instance the effect of the administration of alcohol as an antidote to Veratrum Viride. According to Dr. Edgar the tincture of cantharides in connection with alcoholic stimulants is the best restorative in cases of an overdose. The peculiarities of the action of alcohol are, that small doses increase the pulse in frequency, and large doses increase it in volume, force and fullness, and not in frequency; also that it reduces the temperature of the body, as shown by numerous experiments under the use of the thermometer, applied in the axilla or under the tongue.

The Second Annual Announcement of the Humboldt Medical College—Will be found in our advertising list. Since the last session some changes have been made toward perfecting the list of its Faculty, thus keeping in good faith the promises made in its first circular. The organization now compares favorably with the best in the country.

Dr. C. N. Andrews has been appointed as Professor of Practice of Medicine and Clinical Medicine. Dr. M. A. Pallen as Professor of the Institutes of Medicine and Gynecology. D. D. Duncan, Esq., as Professor of Legal Medicine. F. W. Sennewald, Esq., as Professor of Pharmacy. Dr. A. J. Steele as Adjunct Professor to the Chair of Surgery. Dr. R. S. Anderson as Prosector.

This College we believe is the only one which has initiated or carried out the late grand movement of medical education; if only for the cause, (but besides we wish the gentlemen success,) we hope to see this first step, so bravely taken, as fairly maintained. The energy which has so far carried it on, will undoubtedly keep it alive. We wish it a speedy success.

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Narceine.—Narceine is coming into great fashion among the French to replace morphia. The dose generally given internally, is from a sixth to half a grain. At the outset it diminishes the pulse, but subsequently accelerates the pulsations. It does not seem to produce constipation, but rather a free action of the bowels. It is said to retard menstruation. Dr. EULENBERG prefers it to any other narcotic, and gives it in neuralgia, in painful affections generally, and in articular diseases, iritis, cystitis, and orchitis, stating that it produces sleep, "which is soft, tranquil, uninterrupted, and followed by a quiet awakening." Narceine is reported to be preferable to morphia as a general rule, and to act effectually in those cases in which morphia fails.

The Massachusetts Medical Society—Held its annual session on the 4th of June, 1867, at City of Boston. The president, Dr. Henry C. Perkins, presiding.

The meeting was one of more than ordinary interest. The following are the officers for the ensuing year:

President—Henry C. Perkins, M. D. *Vice-President*—Foster Hooper, M. D. *Corresponding Secretary*—C. D. Homans, M. D. *Recording Secretary*—Calvin G. Page, M. D. *Treasurer*—F. Minot, M. D. *Orator*—Henry G. Clark, M. D. *Librarian*—James C. White, M. D. *Anniversary Chairman*—J. Nelson Borland, M. D.

The following was adopted by the Society:

Resolved, That, in the opinion of the Massachusetts Medical Society, it is inexpedient to admit females as students to our State medical schools and hospitals.

Able papers were presented by Dr. George Derby, on the "Lessons of the War to the Medical Profession." By Dr. Henry S. Clark, on "The Contagiousness of Cholera." By Dr. James C. White, on "The present state of Medical opinion with regard to Syphilis." By Dr. William Cogswell, on "The use of Bromide

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of Potash in Fever." By Dr. B. Joy Jeffries, on "The Anatomy and Physiology of the Ciliary Muscle in Man." By Dr. John Homans, Jr., on "The Pathology and Treatment of Vaginal Cystocele." By Dr. Edward Jarvis, on "Effect of Condensation of Population on Life." And by many others, all showing great research and profound thought.

The discussions were of an able and interesting character, and tended to develop the progress of Medical Science.

American Pharmaceutical Association —Notice is hereby given that the Fifteenth Annual Meeting of the American Pharmaceutical Association will be held in New York City, commencing at 3 o'clock, P. M., on the second Tuesday in September, (10th) 1867.

A suitable room has been secured by the Local Secretary, in the University Buildings, on University Place, corner of Waverly Place.

Aside from the importance of the reports to be submitted, it may be of interest to the Association to know that several of our members now abroad, will act as delegates to the International Congress of Pharmaceutists at Paris, August 21, and will return in time to be present at the session in New York.

A cordial invitation is extended to all engaged in trade or manufacture, connected with Pharmacy, to send specimens of their stock or products for exhibition during the session. These may be sent to P. W. Bedford, Secretary American Pharmaceutical Association, University Buildings, New York City. Notifications to that effect being addressed to him in advance by mail, to 709 Sixth Avenue.

FREDERICK STEARNS,
President Am. Phar. Ass.

Detroit, May 15, 1867.

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THE SAINT LOUIS
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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

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DYSMENORRHŒA.

Read before the St. Louis Medical Society by R. E. BLAND, M. D.

[Communicated for the St. Louis Medical Reporter.]

MR. PRESIDENT AND GENTLEMEN: I made some remarks a few weeks ago on the connection of the rheumatic diathesis with some forms of dysmenorrhœa. My remarks grew out of what Dr. M. M. Pallen, said in regard to the effects of the black cohosh (*cimicifuga racemosa*) in the removal of the distressing pains of a case of dysmenorrhœa under his care.

The medicine was given in the form of tincture in the dose of teaspoonful several times a day, and the pain and distress very rapidly subsided, and soon disappeared. The Doctor attributed its very favorable effects to its powers in the removal of the rheumatic diathesis, the case under consideration being one, perhaps, of rheumato-uterine dysmenorrhœa.

My mind had been directed to this view of the subject some years ago by the publication of Dr. Higginbottom, of England, after which my own observation led me to give more careful attention to the rheumato-dysmenorrhœal character of very many of these cases. When Dr. Pallen introduced the subject to the Society as stated above, I gave it as *my opinion* that many of these cases of dysmenorrhœa are rheumatic, perhaps eight-tenths. It is simply my intention to direct the minds of the profession to the supposed connection of these distressing

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and perplexing forms of dysmenorrhœa with the rheumatic diathesis.

Many years ago Doctors Higginbottom, Gooch, Rigby, together with other distinguished names, elicited medical attention to this rheumato-uterine state. In the course of my clinical observations, I have noted many facts in this connection. The uterus is a muscular organ, possessed of its longitudinal and circular fibres. We all know that rheumatism is a disease of the muscular and tendinous expansions of the body, and that when these are the subjects of rheumatic inflammation the slightest motion of the body or contraction of the muscles causes, sometimes, intense anguish. This being the case in the tendons and muscles of the body suffering from rheumatism, may not the uterus, an organ composed almost entirely of muscles and condensed cellular tissue, be drawn into the same intolerable anguish by the same rheumatic inflammation. Why should we conclude that rheumatism may cause all parts of the muscular and tendinous system to suffer thus while the uterus, a great hollow muscle, with fibres disposed in every direction, is exempt from all such influences?

I have often observed a parallel in the action of rheumatic inflammation upon the muscular and tendinous expansions, and the agony that is experienced in that most singular and painful affection denominated dysmenorrhœa. The motion of a muscle affected by rheumatic inflammation causes most insufferable pain. So, when the uterus is thrown into abnormal action by the peculiar state set up at the menstrual period, who can say the signs of active congestion, recognized in the redness of tissue, the enlargement of the cervix and os tincæ, the tearing agony of the uterine contractions, and the expulsion of the membranous exudations, are not the result of the rheumatic diathesis?

The parallel is also to be seen in the fact that rheumatism is periodical, pursuing its course with great distress and pain to the patient, then suddenly vanishing, leaving but little if any trace behind; so with dysmenorrhœa, especially of the inflam-

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matory type, it makes its advent suddenly, runs its course with great infliction of pain, then as suddenly subsides, leaving the patient comparatively comfortable.

The parallel holds good in another aspect. Rheumatism frequently makes its attacks, and the patient suffers greatly, when the signs of inflammation are absent; there is no swelling, no redness, all the patient knows of the disease is the pain she suffers. It is so with some of the forms of dysmenorrhœa; the action may be violent, the pseudo membranous exudations may be thrown off, and yet the patient is apparently well in the interval, and, so far as the speculum reveals the facts, the signs of inflammation are absent. In either case the disease may be justly termed neuralgic rheumatism or neuralgic dysmenorrhœa.

In most of the cases of dysmenorrhœa that have come under my observation, the parts being brought into the field of vision by the use of the speculum vaginæ, have been of the inflammatory type. This was to be told in the violence of the symptoms, by the engorgement and redness of the cervix and os tincæ, by the force and excitement of muscular action, by the expulsion of membranous exudations, and by the tenderness upon touch.

The rheumatic forms of the disease may be distinguished from those that are not by an enlargement and hardness of the cervix and os tincæ. The cases just mentioned are to be distinguished from those that are the opposite in pathological aspect. In the latter, the os tincæ is soft, sponge like, and when the finger is applied it appears to come against a soft and elastic substance.

These cases are not rheumatic, as may be known in the constitutional conditions to be observed in each. In the former are the signs of active inflammation. The speculum reveals redness, enlargement and hardness, with tenderness of the cervix and os. The latter, on the contrary, presents the signs of anemia; face and surface of the body pale, general languor, no tenderness, or but little, either in the exploration of the vagina or the neck and mouth of the womb, and the vascular

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action, instead of strength, exhibits signs of debility, the only resemblance being distressing pain, and, at times, great anguish during the menstrual flow. The latter is the result of inflammation, but of a character to soften and render sponge-like the cervix and os tincæ. Why these cases are attended with great pain I am at a loss to know, but of the fact I am certain. I have never regarded these cases as connected with the rheumatic diathesis; but taking all the facts in connection with the cases of dysmenorrhea, attended by high inflammatory action, enlarged and tender cervix and os, and these taken in connection with the known imprudences in dress, and otherwise of young girls, and, indeed, of those more advanced in years, and we may very rationally and safely keep our eye upon the rheumatic complication.

Either of the classes or cases described must be separated from another class, which, in violence and strong vascular action, and great anguish, very greatly resembles the first, or inflammatory or rheumatic variety, as well as the second, or anæmic, its cause is entirely different from either. It is not dependent upon inflammation, but upon purely mechanical obstructions; upon malformation, malposition, contracted meatus, etc. These cases are to be relieved only by artificial or surgical means; the sponge tent, the knife, surgical manipulator, to restore the organ to normal position, etc.

So far as my own observation has gone, and the results of treatment been seen, I am sustained, most satisfactorily to myself, in the opinion that active inflammatory dysmenorrhœa, of the first class described, is based upon a rheumatic diathesis, that, perhaps, eight-tenths of the cases of dysmenorrhoea belong to this class, and are rheumatic. So far as my own treatment is concerned, especially as adapted to these inflammatory cases, it has been anti-rheumatic in character, and most satisfactory in its results. After the bowels have been sufficiently purged, the inflamed, enlarged and red cervix and os tincæ relieved by leeching or cooling washes, by quiet recumbent position and

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low diet, I have pursued a constitutional treatment based upon the rheumatic idea.

I have resorted to the use of colchicum in its various forms and combinations—the root of colchicum, the vinous tincture, the acetated extract of colchicum. These I have combined with the preparations of potassa—the iodide, the acetate, the citrate and the bromide. I have used all these combinations with the colchicum, particularly the vinous tincture from the seeds, and the acetated extract of colchicum. These remedies, and their vinous combinations, I have used with very great advantage in the rheumatic forms of dysmenorrhœa, or rather in what I supposed to be such.

The following may be used with great advantage in the acute or inflammatory form of this distressing disease:

℞—Acet. colchici extr. - - - - - - 3i
Acet. pot. - - - - - - - -
Iodide pot. *aa* - - - - - - 3ii
Vin. colchici (sem) - - - - - - 3i
Liquor opii sed. - - - - - gtts. xl

Take twenty drops every three hours to reduce pain; as soon as pain is relieved, then twenty drops three times a day, to be dropped and resumed as soon as the constitutional effects are more or less seen. Or, when other tried remedies fail, the following may be resorted to with good effects:

R—Pulv. gum camph. - - - - - 3i
Pulv. doveri - - - i - -
Sulph. quin. *aa* - - - - - 3i
Rad colchici - - - - - - 3ss

M—Ft. massa; divide into pills, No. 60; take one every three hours, until the constitutional effects of the colchicum are felt, then protract the intervals as circumstances may demand.

I would respectfully ask my medical brethren to devote some attention to this rheumatic idea in the treatment of this very singular uterine disease.

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ON THE FORCE OF THE CIRCULATION.

Read before the St. Louis Medical Society by I. T. Whipple, M. D.

[Communicated for the St. Louis Medical Reporter.]

That the medical profession is fully aware of the physiological and pathological relation of the blood to the tissues, and of its essential action in the functions of the higher vertebrated animals, I do not deny; but that views heretofore and at present entertained are much more complex than necessary, I feel equally as certain; and, in an especial manner, is this true as regards its circulation. That I may be brief, I will offer the following propositions:

1. That during health the blood is so circumstanced that the attraction of gravity does not materially influence or retard its circulation.

2. That in health the propulsory action of the heart is not requisite to the circulation of the blood.

3. That the office of the heart is not that of a forcing-pump, to aid in the propulsion of the blood; but its function is that of a balance to the circulation, measuring each part of the blood before admitting it to the circulation; and its volume and rapidity of action being governed by the great nervous system of organic life, is proportioned, in health, to the demand for blood in the system.

For illustration, we take a glass tube, twelve feet long, and bend it at the middle into the form of a syphon, with equal sides. Now, upon filling this tube with water, closing the ends, and inverting it, with the two open ends below the surface of water, in some convenient vessel, we shall have one six foot column of water supporting another similar column, and being in its turn supported. Now, were this tube sixty feet long, making the columns each thirty feet in length, this experiment will still succeed; but, as the water is sustained by atmospheric pressure, an increase in length much above this point would cause a vacuum at the higher point of the tube which would be filled with the vapor of water. But, by uniting the two open

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ends of the tube, leaving the bore open, we shall have a complete circle, and such a circle, so filled as to contain no air or gases, may be increased in altitude indefinitely, limited only by the strength of material used; for, being full, and the fluid not elastic, no portion of fluid can subside, and as the columns are not supported by atmospheric pressure, there is no tendency to a vacuum. It is also evident, that as neither inertia or motion is an essential property of matter, no greater force will be necessary to put in motion this contained fluid than may be necessary to overcome the friction of the fluid against the walls of its containing tube. Now, to the above experiment the following objections will at once suggest themselves:

1. Membranous tubes are not rigid, and readily collapse.

2. Animal membranes are pervious to the fluids and gases by exosmosis and endosmosis.

To the first objection. If we fill an elastic bag with water, can we force the water from any part of it without dilating some other part, and upon removing the displacing force will not the parts at once assume their original position? Now, the greater part, if not every part, of the sanguiferous canals are not only very elastic, but possess, also, a vital contractility governed by the nervous system, and acting in a proportion always (in health) precisely adapted to the exigencies of the part; by this means the various parts of the system are preserved in their normal state, as regards the amount of blood they contain, the contractile power of the vessels keeping all of them equally full, the tonicity of dependent ones precisely ballancing and annulling the force of gravity (in disease we often see a suspension of this law and its results). Parts must be in normal position.

To the second objection. Those transmissions are governed by fixed laws, and a careful analysis of those laws (I have not the time) will show that the circulation is in no danger from this source, and all objections on this score might easily be combated by the well known and admitted laws of physiology, by which the physical and chemical laws are suspended by the

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vital force. Illustrations of the action of the vital force in suspending the physical and chemical are too well known to need an enumeration at my hands. If so potent elsewhere, why not equally so here?

Now, with regard to the second proposition: Since no greater an amount of force is needed to sustain the circulation than may be necessary to overcome the resistance of friction, it will be readily admitted that that force need not be great.

We have one force in muscular action and the valvular structure of the veins, and during active exertion of the muscles we have a commensurate and proper acceleration of the circulation which answers an evident demand for blood in the system; but during quiescence of the muscular system this force is inoperative.

In the attraction of the individual cells for the pabulum necessary to that functional activity, and in the repulsion existing at the same points for the blood after it has been deprived of the elements required in those cells, and after receiving the effete and extraneous matters to be secreted or re-elaborated by some other cells, we have an additional force; and when it is conceded that every cell in the organism, undergoing change, furnishes such a focus of power, it becomes a matter much easier to comprehend how the heart's propulsive action may be dispensed with in the list of forces engaged in the circulation of the blood, than it is to account for the force which restrains those powerful affinities and harmonizes and restrains the velocity of its current.

Employed in this work, it seems to me, are these two principal agencies:

1. That at each cell change and interchange of elements effected with the blood, there is a certain amount of time necessary. The change is not instantaneous, and is proportioned in the slowness or rapidity of this change to the demands of the part. We see this in all inflammations congestions, and in every vital act. This I deem a great balancing power.

2. In the heart's diastolic and systolic system, governed as it

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is by the nervous system of organic life in the volume, frequency and power, to the demands of the animal economy, we have a great safety-valve able, as an engineer, to increase at pleasure or diminish the amount of blood to be circulated in the vessels of the system or of the lungs. And in health how perfect is this balance. It is a source of admiration and wonder to every one. In disease its conservative power is great.

ON THE CAUSES OF DISEASE.

By F. C. Skey, Esq., F. R. S., Consulting Surgeon to St. Bartholomew's Hospital.

If you inquire into the recent history of a person suffering from disease or illness, whatever form almost it may assume, you will learn of some event or circumstance of recent occurrence that has drawn more or less suddenly whether on his circulating or nervous system, by which the vital powers of his body have been reduced. This condition is commonly known under the term exhaustion, and is the result of a sudden draught on the powers of the constitution, by which the relations hitherto existing between the physical frame and the powers of life inhabiting it, are for the time deranged.

So long as health is undisturbed by any counteracting agency beyond the natural wear and tear of time, life will be prolonged to its full term of years, but in our path through life we are liable to disturbing influences which destroy the equilibrium. These accidents draw on the vital powers and reduce them below the level of standard health, and disease follows as an almost certain result. Let us suppose a man to consume each day a given amount of food. Accident deprives him of a portion of this food, which I will conclude equal to one-half of a day's ordinary consumption. To this amount he fails in the supply of material of blood making, and his circulation is weakened in proportion. That man has become more susceptible of disease, in a ratio with his loss of blood, than he was prior to the occurrence.

Another man, under circumstances whether of choice or compulsion, sustains an unusually great and prolonged physical effort, whether in walking, or riding, or in rowing, of which we see abundant examples in the annual folly of the University boat race. Inasmuch as the serious consequences of these physical efforts, on which the reputation for learning of the great Universities of England depends, are remote, they are not detected. I have seen several examples of disease developed in

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men who have undertaken a walking tour in Switzerland, who have overtasked their powers of endurance, have returned home exhausted by the effort, and have been laid up ill for months.

Any cause which tends to reduce the quantity of blood in the system, whether by direct abstraction or by deprivation of of food as the source of blood, reduces the vital powers, and disease or illness in some form is the consequence. The same principle is involved in the defective supply of oxygen to the lungs, and indeed is applicable to any and all causes that either reduce the blood in quantity or impair its strength for circulation. Any great and unusual physical effort reduces the powers of life in proportion to its degree, more especially when coupled with loss of sleep. Exposure to cold, when severe or prolonged, is a source of subsequent derangement of health, and among other causes may be included either shock to or exhaustion of the mental powers, such as great anxiety of mind or mental emotion, and laborious and continued mental labor.

Of the above causes of disease, direct or indirect loss of blood and deficient food are the most common; and although I have above referred to them, as also to the remaining causes, as sudden, they may be more or less chronic both in their nature and in their consequences. I referred rather to sudden and severe illness or disease as the result of some sudden and palpable change in the routine of life of the individual, in which the evidence of cause and effect is conclusive. I believe, then, that in the large majority of illnesses you may trace back the malady, be it what it may, to one or other of the above incidents as its direct and obvious cause; and as certainly as one or the other of these causes has existed, you may with reason and probability look out for its result in some early attack of illness, medical or surgical, local or constitutional. Whatever function or structure is most liable to derangement, the consequences fall upon it in the first place. It may be diarrhœa, or pneumonia, or abscess, or erysipelas, or rheumatism, or general debility. If you will adopt the habit of tracing back the recent history of any or every patient you prescribe for laboring under disease, you will learn something bearing upon it of the nature I have referred to—some effort overtaxing the physical powers or reducing the circulation or nervous powers of the system; and if so, is it not a reasonable reference that all disease begins by a stage of *weakness?* The first link in this chain consists in a reduction of vital power, from which reduction the effort of the physician or surgeon consists in restoring the lost power and bringing the patient back to the standard of health. In illustration of these principles I will relate a case which occurred to me recently. A healthy lady, of about 34,

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consulted me on account of an abscess in the breast. I concluded she was suckling a child, but I was mistaken. Anxious to ascertain the cause of so unusual an occurrence in an apparently healthy person, I made every inquiry into her past recent history. Have you had a blow on the breast? No. An attack of illness? diarrhœa? any unusual or excessive loss of blood? any great muscular effort or loss of food? All these questions she answered in the negative, and I was about to relinquish my inquiry when the lady said, "Perhaps I ought to tell you that a few weeks ago I sat up seven successive nights with a dying child." I thanked her for such important information, and the mystery was solved. Why should this lady have abscess in the breast? She had not borne a child for many years. There must be some cause for abscess, local or general. It might have been produced by a blow, but it was not. Investigation proved it to be the result of sudden reduction of her vital powers by great physical and mental effort. Why it assumed this particular form I know not. I only know that a great cause of derangement of her system had occurred, and the consequence fell on that particular organ. A gentleman of my acquaintance, whose recent and sudden death caused so painful a sensation, became the subject of phlebitis consequent on severe bodily exercise with a pulse of 50, which no amount of stimulus could raise above it so long as he subjected himself to this daily effort. Here is exhaustion as the cause, phlebitis the effect, and sudden death by embolism.

Inflammation of the uterus or of the venous system below it follows hemorrhage in parturition. Accoucheurs with large experience will confirm this fact.

Many years ago I was present at the attempt to reduce a dislocation of the femur in a London hospital. The man, who was to all appearance in perfect health, was bled largely from both arms and from the temporal artery. He also took tartar emetic to the extent of some fifteen grains. The quantity of blood abstracted from his circulation must have rendered the functions of the heart a sinecure, for it amounted to 120 ounces. He survived a week, and died of phlebitis, as I had predicted.

I might multiply these examples, but it is unnecessary if you comprehend the force of the cases I have quoted. The causes of disease I refer to above may be classed as follows:

1. Loss of blood, whether accidental or effected at the hands of science; catamenial, hemorrhoidal, &c.

2. Loss of blood, or failure of the material of blood making.

3. Excessive purgation, whether natural and spontaneous, as in diarrhœa, or artificial at the hands of science, carrying off nourishment.

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4. Breathing impure air, by which the quality of the blood is deteriorated.
5. Loss of sleep.
6. Excessive muscular effort; as in walking great distances, boat-racing, &c.
7. Extremes of temperature, especially of cold.
8. Great mental emotion or mental shock.
9. Protracted anxiety of mind.

Of the above sources of subsequent illness or disease, the influence of the four first is received more directly by the vascular system, the five latter either partially or entirely by the nervous.

Before speaking of the general treatment of disease, to which I shall shortly come, I wish to say a few more words on the subject of some prevailing doctrines which are so generally adopted by our profession, and the entire soundness of which appears to me yet open to question and inquiry. Why do you order an aperient in nearly every case of disease you are called to see? If the patient is strong and vigorous, the dose is a full one—if weakly, a milder form; but always an aperient, and generally it is combined with mercury, which indeed forms the staple of the medicine all but universally prescribed. As we commonly go at once to the cause, and prescribe our best remedy, the natural reference is that there is either liver or intestinal derangement as the cause of the disease. You say you desire to unload the liver and to remove extraneous and irritating matters from the intestinal canal; and very good treatment too if the liver is at fault and the alimentary canal demands that kind of relief. But what evidence have you of it? You say the liver is congested. It is a term in the mouth of nine-tenths of the profession practicing medicine and surgery. The practitioners on the Continent of Europe take a different view of these matters, and not without some show of reason, for English doctors, though I entertain the highest respect for their attainments, do not monopolise all the knowledge of the world. In discussing the subject, I am prepared to acknowledge the occasional presence of constipation as the result of torpid action of the bowels, in which condition the liver may, or may not, be involved; but I am myself unable to detect what appears so obvious to others—a congested state of this organ calling for large doses of chloride of mercury, supposing that form of drug to be the best corrective of the evil. As I believe a person who is the subject of disease, itself so commonly the product of exhaustion, should not undergo further reduction of his strength without a good and sufficient reason, and as I doubt the congested state of the liver and find the torpid condition of the large intestine, if it exist at all, an

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evil on a small scale, I prefer to look to the disease itself (suppose it, if you please, erysipelas or any other malady), and if the pulse is soft and compressible, indicating distinct constitutional weakness, *and not otherwise*, I prescribe at once a tonic remedy. I look upon this torpid condition of the large intestine—for, observe, nearly all constipation is limited to this part of the alimentary canal—as merely a symptom of the general debility, and increased by loss of appetite and the absence of food, and is not to be rudely and violently assaulted by drastic purgatives; and one of the first signs indicating the sound principle of a tonic treatment will appear in the gradual, but certain, restoration of the functions of the alimentary canal to a state of health. Constipation is very commonly, though not invariably, the concomitant of weak health and low vital power; and is caused by defective power of the muscular fibres of the large intestine, which are, when compared to the small intestines, very limited in quantity in relation to the size of the intestine. You treat constipation by means of purgatives which act on the mucous membrane only. I prescribe iron, to give tone to the muscular coat. Your treatment affords a temporary and transient benefit; mine is a permanent one. Which will you prefer? And this subject leads me to add a few words on the treatment of disease adopted by my own respected teacher, Mr. Abernethy, who upheld the doctrine that health demanded the daily action of the bowels, and that the liver was an offending organ and demanded the daily administration of a stimulant or a supposed provocation to the secretion of an increased quantity of bile. No doubt Mr. Abernethy's treatment was to an extent successful because, as the tendency of the large majority of diseases is towards recovery at the hands of Nature, his cases prospered like those treated on other principles. In these days one does not quite comprehend how a man of Mr. Abernethy's grasp of intellect could delude himself with the idea either that disease could so generally depend on torpidity of the liver, or on imperfect action of the muscular coat of the large intestine. If it be necessary to obtain, as the requisite condition of health, a daily action of the bowels, why did nature give us large intestine sufficient to contain at least a week's consumption of food.

In cases of extreme weakness good service is often rendered by "locking up" their bowels, and reducing the action to that of alternate days.

I considered the treatment of the great majority of diseases to consist in increasing the quantity of healthy blood and giving force to the action of the heart. *You can't cure disease with a feeble pulse.* Mend the pulse, and Nature will do the rest of the work. On this principle disease in general may be

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treated, so far as my observation has gone, with pre-eminent success. In order to appreciate fully its force, you must start with the conviction that Nature cures and not man—man removes obstructions from her path, and nothing more. This done, he awaits the onward move of the great machine, like to a great ship of gigantic weight, which, quietly held in her position at rest by a few timbers, immediatly obeys the great natural law of gravitation on their removal, and glides into the water below. Did man launch this vessel, or did Nature? With as much title may the physician or surgeon declare that he cured a disease. There are of course occasional exceptions to this assertion in some cases of operative surgery. The object of treatment is to restore the pulse to its normal standard of force and frequency. Give it due force, and the heart will determine the number. As a rule, in cases of debility, it is too frequent, and frequent because the quantity of blood in the system is below the standard of health. Increase the quantity, and the pulse falls. Assure yourself of this. Unthinking persons jump to the conclusion that brandy or other stimulants necessarily raise the pulse, but this supposes that we start with a healthy pulse at par. I am talking not of health, but of disease. In my capacity of Examiner at the College of Surgeons, I often put this question. If you take a pint of blood from a healthy man of 40, with a standard pulse of 68, what effect will be produced on the number of pulsations by the loss? What do you imagine is the frequent reply? "It reduces the number to 60!" And this curious answer explains something of the phenomena of venesection so universally practiced some years ago, when in reporting on a case it is said "His pulse rose on bleeding, so I bled him again." As a rule, you will find that whenever the frequency of the pulse is above the standard of health, *as an indication of debility*, a stimulant will reduce it. I tried this experiment, or rather I obtained this test, for it was not an experiment. On coming out of a Turkish bath of something more than the usual intensity of heat, my pulse had risen to 90; I drank about two ounces of wine, and my pulse fell to 75 within a few minutes.

I have something more to say on common matters relating to the routine of every day's practice. There is great repugnance prevailing in the medical mind to the employment of stimulants. It is, perhaps, mainly founded on the moral evils of excess. Inebriety is a low, vulgar vice, and therefore the agents producing it are morally objectionable and medically injurious; but you must draw a distinct line between health and disease. In health I am the advocate, both in precept and example, of moderation, in disease not. I think one reason why stimulants are so little resorted to in cases of debility

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is because, being administered in hesitating quantities of doubtful utility, their value is not appreciated. You must not gauge the capacity for alcoholic stimulants in disease by the capacity of the same person in health. Those only who adopt this treatment as a principle are cognizant of the remarkable tolerance of stimulants under great prostration of the vital powers, and when required as the antidote to prostration I maintain they are perfectly harmless. It is the remarkable tolerance of alcoholic stimulants in these persons to which I wish to direct your earnest attention. You can not intoxicate these people; you can not even unduly excite them. It is a common remark among observant persons under treatment, "I drank three glasses of wine, but it had no more effect on me than so much water;" whereas less than the same quantity during health would have produced partial intoxication, or at all events excitement. These are the persons who demand the free and fearless resort to stimulants, and to whom alcohol is life. Do not, I again urge upon you, measure the quantity to be administered by the glass. Gauge it by its effects, and so long as weakness prevails, indicated by the pulse, persist in its use; and as you proceed in your treatment, and the services of the wine become more and more palpable, you will not fail to see that its consumption becomes less and less essential to onward progress, and in the course, it may be of months, of weeks, or even of days, you will reduce the quantity to the standard of health, for the capacity for wine has passed away with the disease that claimed it. You need never listen to the objection often urged that the resort to stimulants will become habitual; be assured it is entirely groundless. Now listen to the following examples of this principle of treatment. A young lady whose daily consumption of wine has never exceeded two glasses, oppressed by the heat of a crowded room, faints. The heart and the brain have failed in their functions by reason of the imperfect oxygenation of the blood. Recovering from the first stage of sudden depression of her vital powers, her symptoms pass into those of hysteria. We have all witnessed cases of this kind. Ordinary and mild stimulants are unavailing, and make no impression. An hour, two hours, have elapsed, and she is yet prostrate. Before her recovery this girl has consumed three wineglasses, or upwards of half a pint, of brandy and other cordials, and often more. What is the explanation? What is the physiology of this? Had you administered this quantity to your patient during health, you would have done her a severe injury. She now takes it with benefit and with impunity. The shock to her system was for the time dangerous; the stimulant, given at another time, would have proved dangerous also; the two united are harmless. The one

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has balanced or antagonized the influence of the other. There remains neither headache, nor nausea, nor any evidence of excess, because all the stimulating power of the brandy was required and consumed in re-establishing the circulation. Again:

A gentleman of abstemious habits, ill-clothed for the occasion, ventured, in a cold season of the year, to mount to the summit of a mountain in Wales. He was seized with intense and sudden prostration from the effects of the temperature. His suffering was severe. At this opportune moment, a friend supplied him with a half-pint bottle of raw brandy, every drop of which he drank at a draught, as he would have drank a glass of table beer. The only effect produced on his system was warmth. He drank more brandy at that moment than he had ever before consumed in a week. No evil resulted. The cold and the brandy being in antagonism, each entirely neutralized the injurious effects of the other. I need not say that a similar draught, unprotected by the depressing influence of the intense cold, would have proved almost dangerous to life itself—certainly most injurious to health. I attended in his lasti llness the late Duke of B——, a man of remarkable abstemious habits. His malady was a mortal one. Some months prior to his death he became the subject of frequent attacks of rigors, which continued with great severity for two or three hours, and left him in a condition of extreme prostration. I called one day opportunely, and found him laboring under one of these attacks. I gave him two-thirds of a wineglassful of raw brandy without effect. In five minutes I repeated it, and he took a wineglassful of brandy every seven or eight minutes till the attack passed off. He had then consumed three-quarters of a bottle of pure brandy within an hour. I saw him in four hours afterwards, apparently well. In reply to my question, "How do you feel?" he answered, "Well, I think you gave me pretty large doses of brandy, but I can not say I feel in any respect the worse of it." Nor was he. Throughout his subsequent illness he had no attack of rigors. The prostration of the vital powers in this case must have been immense. One of the last cases attended by a late eminent physician—now, unhappily for the cause of medical science, lost to the profession—was a gentleman of about 30, who was the subject of hydrothorax. His case was urgent, and I was requested to see him. Concurring in opinion with the physician in attendance in the necessity of giving immediate relief by operation, I punctured the chest and got away six pints of serous fluid. The cavity thus made was entirely occupied by atmospheric air, to the admission of which I have never yet ascertained the grounds of objection or seen any injurious result therefrom. I have done this operation often, and have never

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considered it desirable to exclude the air from the cavity within. Though irrelevant to my subject, I can not forbear asking the simple question, What is supposed to occupy the space from which the fluid has been removed? Certainly the lung will not immediately expand, and the walls will not collapse for a period of weeks or months. At the conclusion of the operation the patient was much exhausted, with a pulse of 130. It was a great object in the treatment to reduce it. What means would you have adopted? what does professional usage demand? Salines, think you, or purgatives? No, on the contrary. He took the only remedy that could have probably saved his life. He was ordered 1 oz. of brandy diluted with an equal quantity of water every three hours, and on the day following his pulse had fallen to 90 and he recovered. If this treatment was not sound, it ought to have proved fatal. I have abundant examples at hand of the efficacy of this principle, but I have quoted sufficient for my present purpose. They go to exemplify this therapeutical principle, viz.: 1. That stimulants alone can restore the vital powers under great and sudden prostration; and 2. That under great and sudden prostration the capacity of the system for stimulants is enormous, and may be administered to almost any amount with safety.

Now, gentlemen, in the prosecution of your profession, while engaged in the study of by far the most critical department of medical education—the nature of disease, or diagnosis—have you ever thought of the important distinction which exists between the diseases of animal and organic life? And yet they are worth considering. A few years ago I made some calculations on the subject of the relative quantity of blood supplied to each. I have not these calculations at hand, but the quantity of blood so distributed is nearly equal, though rather the larger proportion supplies the structure of animal life.

The nerves, as you know, are essentially different, animal life being spinal, organic life ganglionic. If we take the whole material of the body into the calculation, the structures of organic life do not exceed one-tenth of the actual weight, yet they receive nearly one-half of the whole quantity of arterial blood.

The "two lives," as they were termed by the great French physiologist, Bichat, are more or less independent of each other, both in health and disease. The diseases of organic life are more serious, because they involve structures more essential to life itself, and the derangement of any one of them involves the whole system more thoroughly than does a similar amount of disease in the structures of animal life.

You will hear a man say "he can't have much wrong with him," because he is capable of great exercise, and can walk any

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reasonable distance. This is a bad test. So long as the muscular system is not directly involved, and sufficient blood is made to supply both it and the spinal cord from which it derives its nerves, a man may labor under a considerable amount of desease of the structures of organic life without his muscular system being involved. When we speak of a man's "health" in general terms, we refer instinctively to the functions of the interior of the body or of the organs, not of the muscular system; we refer to the functions of the brain, to respiration, to circulation, to digestion, and the assimilation of food, &c. The muscular is but subservient to these other organs which really constitute life itself.—*Medical Times and Gazette.*

A CASE OF METRITIS FOLLOWING INDUCED ABORTION, AND COMPLICATED WITH SCARLATINA.

By E. R. Hutchins, M. D., Philadelphia, Pa.

Mrs. Annie J———, aged 28, mother of two children, first came under treatment, Sunday, January 13. The preceding Thursday she had consulted a woman, who had lately been arrested for producing abortions, but was soon after acquitted by court, and she was given a "brown powder," with directions to return in two days. Accordingly, on Saturday following, she again presented herself to this woman, who gave her another "brown powder," and directed her to lie upon the bed. When this was done, "she *pushed* her finger into the womb," producing but little pain, and no immediate discharge. Nine hours after she aborted, at two and a half months; the hemorrhage, as described by the nurse, was profuse. Sunday, January 18, thirteen hours after abortion, she presented the following symptoms: Pain severe and lancinating in umbilical and lumbo-sacral regions; violent headache, with delirium; upon closing her eyes she experienced great "coldness" on vertex, and *at once* became hysterical; now laughing as in high glee, and now crying and sobbing like a child; skin hot, dry and flushed; tongue thickly coated, white; pulse small and frequent, 129; profuse discharge from vagina. Administered half gr. morph. sulph. hypermodically, followed in *three minutes* by calm and undisturbed sleep.

Monday, 14th. Slept three hours after injection last night, but upon waking was delirious and restless; her eyes are glaring, and constantly she opens and shuts them; pain severe in supra-pubic region; tenderness upon pressure; pulse 120; bowels constipated; discharge from vagina unabated; shreds of

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tissue, mixed with blood, escaping; no appetite. Ordered a copious enema, and tinct. valerian, and sol. morph. sulph., ʒj., aa., every two hours. P. M.—Pain still severe; less delirious.

Tuesday, 15th. Slept only at times during the night; less delirious, but at times seems very much in fear of some imaginary evil; discharge the same; skin hot, dry and florid; very thirsty; pulse 116; complains of sore throat. Ordered warm poultice to throat, with gargle of chlorate of potassa. P. M.—Tongue has thrown off its fur, and is now deep red, papillæ projecting; efflorescence indistinctly papulated, bright red, hot and dry, with lining membrane of mouth, fauces and pharynx inflamed, indicate scarlet fever at hand; the abdomen is painfully tender, and somewhat tense. Ordered large hop poultice to abdomen, warm water enema; barley-water, with an excess of chlorate of potassa, to be taken *ad lib;* discontinue val. and morph.; gin to be taken as the stimulant.

16th. Abdomen less tense and tender; scarlatina well marked; throat ulcerated and painful; expectorates mucus freely, mixed with blood; discharge from vagina profuse, and slightly offensive; somewhat delirious; pulse quick, 102; headache severe. Directed the treatment to be continued, with the addition of Dover's powder at night.

17th. Throat worse, swabbed it well with sol. arg. nit., gr. xxx. to ʒj.; no appetite; rash distinct over entire person.

20th. Febrile sympotms much improved; throat better, but still sore; desquamation going on nicely; pulse 96; excessive pain in lumbo-sacral and supra-pubic regions; discharge from vagina profuse. *Examination of uterus with speculum.* Whole uterus enlarged and inflamed; bright crimson in color; both lips swollen, anterior being hard and dense, while the posterior is soft and spongy, with a jagged cut extending directly through it, reaching up into cervix, and having its edges ragged and sloughing. The wound presented a somewhat stellate appearance, evidently produced by *forcing* the finger *through* the narrow os, and *tearing* the tissues in its way, until it reached the fœtus. Blood, mixed with pus, was freely flowing from os and wound. Applied to os and margins of wound only, sol. ferri persulp. in the following proportions: Monsel's sol. ʒj. to ʒjv. of water. This gave considerable pain, for which an opium suppository was ordered for vagina. Gave quinine and iron, with beef-tea and milk-punch. Copious warm water injections were thrown up the vagina three times daily. Unable to sit up at all.

21st. Still much pain; discharge free and offensive; patient

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weak and low-spirited; throat well. Discontinued the use of barley-water.

24th. Symptoms of scarlet fever entirely disappeared; patient very weak, with but little appetite; tongue lightly furred; examination per vaginam shows improvement, but slight; discharge as free as ever. Renewed application.

20th. At times the pain is very severe; discharge not abated, and of a most offensive odor. Applied sol. ferri persulph. one-third stronger, not passing it as yet *into* womb.

Feb. 1st. No improvement; pain very severe; edges of wound still ragged. Applied equal parts of water and Monsel's sol. Produced great pain and soreness, which was at once relieved by hypodermic injection of morph. sulph., gr. ¼.

3d. Much improvement; less discharge and less pain; edges of wound showing a disposition to heal kindly; less ragged in appearance, and pouring out some pus. Reapplied solution.

7th. Patient stronger, and has a better appetite; is able to sit up in bed a short time; uterus diminished in size; posterior lip less spongy; anterior less dense; discharge is free and offensive; edges of wound approximating. Renewed application.

10th. Decided improvement; edges of wound uniting, and excavations filling up with healthy granulations; uterus nearly normal in density. Applied *pure* Monsel's sol. to parts, and injected a drachm into cavity of uterus. Has pain now only at intervals; discharge less, but still somewhat offensive.

14th. Patient able to walk about a little; wound entirely healed; slight congestion in cervix; hypertrophy sensibly diminished. Applied Monsel's solution freely to cervix and injected it into cavity of uterus.

17th. Yesterday was the day for the menses to appear. She accordingly experienced much pain about ovarian and lumbo sacral regions, and there was an abundant "show."

22d. Examined the uterus, and found congestion subsided; uterus normal as to position and density; os large, as in recently gravid uterus; pain diminished, and discharge ceased; patient feels strong, and is able to be about attending to her duties.

Discontinued all treatment, save free injections of cold water to vagina. The case is an interesting one, showing to what an extent abortions are carried—injuring seriously the uterus, as well as the nervous system generally—and also showing a very satisfactory and rapid recovery.—*New York Medical Journal.*

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EPIDEMIC CONTAGION.

Read before the New York Academy of Medicine, by Dr. Wm. E. Roberts.

Seven great epidemics are generally recognized, viz.: typhus, small pox, scarlatina, measles, whooping-cough, influenza and cholera, each of which is caused by a separate and specific morbid poison. To this list may, perhaps, be added plague, erysipelas, puerperal fever, mumps (porotitis). Plague is never seen among us. Erysipelas and puerperal fever, with typhus, seem to be interconvertible, and *may* be one and the same disease, and derivable from the same animal poison. Intermittents are never epidemic nor zymotic, neither is yellow fever epidemic, but its virus is transportable, and its contagiousness not wholly undoubted.

Various hypotheses as to the nature of these poisons exist; atmospheric, telluric, animalcular (the most probable), fungoid, spontaneous, gaseous, solid, etc., but nothing is as yet positively known on the subject.—(See Holland, *Notes and Ref.*)

All epidemic poisons seem to have reached Europe from the East, and to have found their way hither. None have originated here; but of the manner in which they originated, nothing is known; all are of great antiquity. The poison of cholera had existed in India for centuries before it was introduced into Europe, and then into America, and is now endemic there.

These poisons, however originating, infected the human body with a specific disease which has never changed or lost its power or property. Many of them possessed the power of re-multiplying themselves in the body, by an intra-corporeal zuma or zymotic (ferment); the germs so multiplied being exhaled from the body with secretions, and diffused in the surrounding atmosphere, there again undergoing an extra-corporeal, intra-aerial zymosis and reproduction, and infecting those brought into indirect contact with the patient, through the medium of the (impure) atmosphere. Contagion of the second genus (J. M. Smith). That germs further multiplied and diffused through the air (intra-aerial zymosis), wafted by the wind, or advancing by their own peculiar powers of progression, invade various localities at intervals, or in succession, and produce endemics, or epidemics, which are a succession of endemics, each poison producing its own specific disease, with its attending phenomena.

Emanating thus from the bodies of the sick, they become *animal* poisons—*idio-miasmata*. Those poisons which are *animal*, specific and zymotic, are both contagious and epidemic; no others are or become such. To say that a poison is an animal one, is tantamount to this. Diseases of malarious origin:

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Koin-miasmic are never extra-corporeally zymotic, never contagious in any degree, unless mixed (idio-koino miasmic) and never epidemic. Nor are the poisons transportable by air or other fomites, unless we say that of yellow fever is, and allow it a measure of contagiousness for which some have contended.

Such diseases arise locally from certain causes, prevail locally, and do not extend far (endemic), and cease on the cessation of their cause, leaving behind no latent germs of infection for future development. Bilious, remittent and intermittent fevers belong to this category. Influenza, the genesis of which is unknown, is per aerially portable. Specific poisons communicate their own action and effect, analogous transformations in the bodies of the sick, and the disease produced by them, is always one and the same specific, and *sui generis*. In the case of typhus, erysipelas and puerperal fever, there is observed a curious interconvertibility of poisons, the one sometimes transmitting the other, which has caused them to be regarded as identical poisons and diseases, although each is often seen unmixed and pure. Sometimes they concur, and only one poison is transmitted, either according to its greater prominence, or under circumstances and influences unknown. Other morbid poisons concur in the same individuals, and thus we see, that while the general rule holds good, that specific poisons produce specific diseases, poisons may co-exist, if they do not blend; and a mixed, mongrel compound, or spurious disease exist, or result, not easily to be classified, of which certain forms of typho-bilious, ictoroid or malarial fevers are examples. The poison of one disease seems superadded to the other.

Mr. Farr, Reg. Gen. of England, tells us that "zymotic" is now substituted to avoid a tedious periphrais of "epidemic." All epidemic (zymotic) diseases, I believe, are contagious, except influenza (which may not be zymotic), extra-corporeally, although inter-aerially it must be, to account for its excessively rapid development. So that, with this exception, all *epidemics*, cholera included, are zymotic and contagious; and, because zymotic and contagious, epidemic, which others, not such, are not.

Contagions of the first genus (actual contact) are intra-corporeally zymotic, in a degree, producing disease only in the body of the recipient, but, by infecting his fluids (blood, lymph, pus, etc.), enabling them to communicate the same diseases by actual contact (inoculation). They are not communicable through an atmospheric medium, nor are they mixed; for, although, if blood be drawn with the vaccine virus from a syphilized child, syphilis may be communicated, yet pure fresh lymph alone communicates no such disease. The exanthemata concur; but each eruption is distinct and separate; and the rash

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of typhus, the rose-colored lenticular spots of typhoid fever, and patches of erysipelas, may all concur or co-exist in the same individual. Hence it seems difficult to consider them identical poisons. Two, at least, of the exanthemata are inoculable also.

Typhus and typhoid poisons may concur in the same individual. These are the cases which have caused the doubts as to the separate identity of the diseases, and produce in the same case a coincidence of the symptoms and pathological lesions of each. Mixture of idio and koino-miasma produces a hybrid class of fevers, of bilious or ictoroid character, with yellowness of skin and black vomit, which, as a general rule, is not seen in typhus fever. The typho-malarial fever, described by Dr. Woodward, U. S. A., in camp fevers, which he deems non-contagious; the compound Banker street fever of 1820; the Irish icteroid typhus, or yellow fever, as described by Graves in his clinical lectures; the Bulam fever of Africa, and the disease on board H. M. S. Eclair, etc., seem all of this character; and it is very difficult to make the diagnosis between them and yellow fever. A strong infusion of the *koinic* element gives to them their bilious character. A similarly predominant idiomiasm determines their typhoid character, and imparts to them a qualified contagiousness. Perhaps it is to the superaddition of idio-miasma (typhus poison) from without, or inwardly generated in course, that the typhoid character of many diseases so characterized is to be attributed.

A certain amount of intra-corporeal zymosis is necessary, in all cases, to produce disease; but, unless the morbid product so formed be eliminated (extra-corp. zymosis) no contagion follows, and the disease remains confined to the body of the recipient of the poison, and not extending beyond him. *If animal*, it may be reproduced in another by inoculation with his fluids, and becomes a contagion. If not, it dies in the patient, and is not reproduced, and hence is never contagious or epidemic (*ex. gr.* intermittent fever poison); only certain kinds of persons seem to be susceptible of this elimination of reproducible germs, this that I have called extra-corporeal zymosis, and these are the contagions proper. No disease is contagious in which this does not occur; and I think that, unless there were a further intra-aerial zymosis, regeneration, remultiplication and diffusion *per auram*, of specific germs, wafted by currents, or progressing by means of vehicles, or by a peculiar power of self-progression, whereby the poison is rapidly diffused and regenerated, and everywhere carried so that all are subjected to its effects, according to their degree of predisposition and susceptibility, epidemics could not occur.

If the poison generated in and exhaled from the bodies of

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the sick extended no further than a few feet from the bodies of the sick, and was there diluted or destroyed by ventilation, I don't see how diseases could spread as they do, and become universal. Upon this point there is some difference of opinion. On the one hand, it is said that the miasms of small-pox and typhus extend only a few feet from the bedside; that "there are no grounds for the popular opinion that typhus may be propagated through the atmosphere, from a poor-hospital to the houses in the neighborhood," (Murch,) which, although opposed to the idea of intra-aeriel zymosis and progression, may be true in the absence of any epidemic prevalence of the disease.

On the other hand, it is said that although the spread of the typhus virus is limited, that of small-pox does extend through all parts of the house, from a single bed, even from one house to another in the same vicinity (Wood Pract. of Med.) It is known that more than fifty persons contracted small-pox from the body of Louis XV. by simply traversing the vast apartments of the Palace of Versailles, in which he lay mortally ill of a most virulent form of that disorder, without ever approaching his person. That the virus of small-pox has crossed a river 1,500 feet wide, and infected persons on the other side; that the poisons of scarlatina and puerperal fever infect all parts of a house or hospital long after the removal of the inmates and thorough purification; that during the prevailing measles, or scarlatina, or cholera epidemic, and even yellow fever, persons are infected by walking the streets, and in houses, without approach to the sick, which is a thing of daily observation and occurrence in private families, and could not happen unless there were a poison in the air. Court-houses have been infected throughout by the entrance and transport of miasm from filthy, not diseased, prisoners (Black assizes) Murchison says that "typhus prevails, for the most part, in great and wide-spread epidemics, independently of smaller endemics," and Graves distinctly says that "typhus will spread among hospital patients in the same ward, independently of anything connected with filth or foul air," not always communicated, I should suppose, by the persons of the attendants. We know that these poisons exist in the air, attack persons on ship-board, long and far away from land, persons in solitary confinement (small-pox and cholera). In cholera, hundreds of cases occur within the same day, at such distances, and in such diverse parts of a city, that they can not have arisen from a personal intercourse, or from its infection. Influenza, yellow fever, and other malaria are felt, on approaching a coast where they prevail, at some distance; and the former affects almost the entire population of a city, town, or neighborhood in a few days, and

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spreads, at times, over an entire country or continent; its cause being certainly portable. How shall we explain these discrepancies of opinion, or account for the rapid and wide-spread of these epidemics? By uniform personal contact? By fomitic infection? By *de novo* genesis, or development under meteorations or epidemic influences, which can not apply to imported poisons, however much they may favor it, and is not known to be true to any? Or by each and all of these causes combined, together with an intra-aerial development and re-multiplication of infectious germs (zymosis) and a peculiar method of progression of germs, a zymosis, not in the body alone, but in the air and soil; the poisonous air becoming a ferment which produces its like," (Clark's Lectures, *Medical Record*, lect. 3d). It is not necessary, it is not possible, in any prevailing epidemic, to look for personal contagion in every case as a cause of infection. The disease is too general, and its spread too rapid. The atmosphere contains the poison, however introduced or developed If the disease is specific, the poison is specific, or the disease could not be induced. If it is intra-corporeally zymotic, reproducible, that is from the bodies of the sick, it is contagious, and the infection, *in any way*, by a specific and zymotic person, is contagious; and, except in the case of influenza, I don't believe that any existing epidemic is wanting in this character; and, if all poisons are absorbed, communication of specific disease, in any way, from one person to another, is contagious, whether by swallowing of air or infected fluids, or by contagious or pulmonory absorption, which is most probable. The mode of infection is the same in all, no matter where the poison is derived from, breath, or skin, or stools, and they are all similarly contagious (contracted, that is, in the same way), but not equally so, which depends upon the virulence and dose of the poison, and the degree of susceptibility of the exposed.

To originate epidemics, a contagious principle and a meteorations influence may both be needed. Spontaneous development does not oppose contagion. All known contagions of epidemic character so originated, and they may again do so. But most of them are now domiciliated and domesticated, and arise now from development of small stocks of concealed contagion, which is always possible when spontaneous development is suspected. Some, yellow fever, cholera and influenza, are never known to originate *here;* always they are imported poisons, and their germs, if not contagious, are at least portable. No specific poison can be introduced anywhere whose germs are not portable and specific, nor regenerated, unless zymotic, intra-aerially at least; so that portability of such germs may almost be said to be synonymous with contagion.

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The germs of typhus, small-pox, whooping-cough, scarlatina and cholera are portable by fomites, perhaps those of typhoid fever, and they are all contagious. Those of yellow-fever and influenza are transportable through the air, regenerable in it, multiplicable in it, and zymotic in it, and infect by absorption. But if they be not intra-corporeally zymotic and exhalable poisons, they are not contagious. Thus the intra-corporeal zymosis is the test of contagious epidemicity. No such property attends the miasms of bilious, remittent, and intermittent fever, which are never either epidemic or contagious. Direct contagions of the first germs differ from those of the second (indirect) mainly in that there is no extra-corporeal emanation of contagious germs. The exanthemata, although supposed to be usually of spontaneous origin (Smith, Barker, etc.), and certainly at times imported, small-pox especially, now generally arise from rekindlement of small stocks of dormant virus always on hand in large cities, and, perhaps, elsewhere. Typhoid fever is supposed to be engendered by fæcal fermentation, filth, etc.; and many attribute typhus to similar local causes. Erysipelas would seem, also, to arise independently of contagion. These are not, like cholera and influenza, imported, and may have new and local organs. But it may be that no zymotic poison, once existent, ever does become wholly extinct; the exanthemata never have, and cholera is still endemic in India, and local circumstances and meteorations influences easily and soon rekindle them. Doubtless they occur comparatively less frequently under the improved state of hygienic science.

But I doubt if we are authorized to deny, as some zealous sanitarians have done, that there is any such a thing as contagion, and assert that *all* so-called "contagions" result, in every instance, from neglect of sanitary precautions. Diseases, so originating even, would not the less *be* contagious, say small-pox, for example. How, then, deny its existence?

There is no such thing as contingent contagion; it is only qualified. Epidemic diseases are not identical; but are all analogous in general law and action, although differing specifically, yet so much alike in these, that what is true of one is true, for the most part, of all. Influenza seems to be the only epidemic poison in which zymosis (and that not extra-corporeal) is separable from contagion. No morbid poisons originate within the body; they are all received from the air into it. Those which are subsequently reproduced in and eliminated from it and become animal, whether originating in an idio or koino-miasm, or zymotic contagions. It is curious how different are the varieties and effects of poisons whose (original) causes appear so similar. Epidemic influence alone will not

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account for them, and, if they did, nothing is known of its mode of action.

That *typhus* originates from ochletic miasm, is generally believed; but not by Watson, nor by Wood, that offensive effluvia, filth and poverty produce this specific form of fever. But there is between them, whether as cause or effect, a connexion so close that it can not be safely disregarded.

Barker attributes to the foul effluvia of drains, cesspools, etc., cases of typhus, and scarlatina even; and Murchison thinks that typhus fever may be so induced. The real character of the diseases, if any, so produced, is an interesting subject of physiological inquiry.

These statements, in regard to epidemic contagion, are generally known, and to be found in most treatises on practical medicine, and the influences from them, right or wrong, are easily drawn. But I do not know where, elsewhere, they are as succinctly collected and enunciated.—*Medical Record.*

HINTS ON SPECTACLES.

The natural decay of vision occurs usually from thirty to fifty years of age, varying according to habits and employment of the individual. Sometime during this interval the refractive powers of the crystalline humors of the eye slightly alter their condition, while the crystalline lens and cornea change their form, so that a difficulty of distinct vision is felt. The eye loses a portion of its power of seeing at varying distances or its power of adjustment, and near objects are no longer as easily seen as in youth. Reading small print by candlelight is difficult, as the book requires to be held at a greater distance from the eye than formerly, and a more powerful light is needed, and even then the letters appear misty, and to run on into the others, or seem double. And still further, in order to see more easily, the light is often placed between the book and the eye, and fatigue is soon felt, even with moderate reading.

When these symptoms show the eye to have altered its primitive form, spectacles are absolutely needed. Nature is calling for aid, and must have assistance; and if such is longer withheld, the eye is needlessly taxed, and the change which at first was slight, proceeds more rapidly, until a permanent injury is produced.

There is a common notion, that the use of spectacles should be put off as long as possible; but such is a great mistake, leading often to impaired vision for life, and is even more injurious than too early employment.

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Timely assistance relieves the eye, and diminishes the tendency to flattening, whereas, should the use of spectacles be longer postponed, the eye changes rapidly; and when the optician is at last consulted, it is found that a deeper focus spectacle must be used than usual for the first pair, and even these suit but a short time, and have to be again exchanged for those of still deeper power; and these changes become a matter of necessity which, unless judiciously checked, continue during life.

It must not be forgotten that, when first using spectacles, they are not required during daylight, but only for reading, etc., by artificial light; and it may be from six months to two years from the time of first adopting them ere they will be required for day use.

Short Rules for the Preservation of Sight.—It is of the highest importance that near and distant objects should be equally examined, so that the eye may preserve its fullest power of adjustment; this should be done by the unaided eye alone, where it is possible, but the short-sighted should always use spectacles, as the power to see at different distances becomes paralysed, and different spectacles for near and distant objects will be required.

Spectacles should only be worn to compensate for any deficiency or excess of refractive power of the eye, and this deficiency or excess should be most carefully ascertained by the use of the optometer in order to guide us as to the requisite focus.

Use the softest washleather to wipe your spectacles, and if the lens become scratched, have them exchanged at once.

Single eye glasses are injurious, as all the work has to be done with one eye, and then a prolonged use is always followed by the focal length of the eye differing in each.—*Druggists' Circular.*

Incontinence of Urine successfully treated by Extract of Belladonna.—A healthy looking country girl, fourteen years old, was brought by her mother to the Metropolitan Free Hospital on the 11th of January last. She had suffered from nocturnal incontinence of urine for the last two years. Not a night passed without her wetting the bed, and to such an extent that she had been compelled to lie upon straw covered with a sheet in order to change her bedding daily. She had been taken out of bed at night, scolded and ridiculed, without any effect in making her abandon the habit. Dr. Drysdale ordered her to take a quarter of a grain of extract of bella-

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donna as a pill, to be taken at bedtime every night. On the 15th of January her mother came to say that she had not wetted her bed since taking the medicine. Up to the 18th of January there was no return of incontinence of urine. Dr. Drysdale remarked that he had, in many cases, seen similar results from use of belladonna in this disease, and supposed the drug acted by paralysing the detrusor urinæ muscle.—*London Lancet.*

THE MEDICAL REPORTER.

ST. LOUIS, JULY 15, 1867.

REVIEWS.

AN INQUIRY INTO THE ORIGIN OF MODERN ANÆSTHESIA. By the Hon. TURNER SMITH. Hartford: Brown & Gross. 1867.

These papers were originally published at Philadelphia, in the *Medical and Surgical Reporter.* A thorough history is given in conformity with the facts, and conclusions reached different from those which are generally received. To Dr. Horace Wells, of Hartford, Connecticut, in 1844, is due the honor of having first tested the efficacy of nitrous oxyde gas as an anæsthetic.

The work before us is well worthy of perusal. It is full of historical interest, and, perhaps, treats more logically of the parts in the case than any other which has yet appeared.

PRACTICAL DISSECTIONS. By RICHARD M. HODGES, M. D., formerly Demonstrator of Anatomy in the Medical Department of Harvard University. Second Edition. Philadelphia: Henry C. Lea. 1867.

This very excellent work comes to us in a neat and convenient form for the student of anatomy. The second edition has been revised, and in examining the contents we know of no better work for the object in view. The plan pursued is the description of all such parts as may be exposed at one dissection, except, of course, such minutiæ as may require a special dissection. The work is of great value to the student of medicine, for it is the result of ten years' experience in the dead room.

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The Health of St. Louis has been, and still is, remarkably good. Probably, for a very long time, we have not been blessed with such immunity from summer disease. By refering to our tables of the mortuary statistics it will be seen how low the wave of disease has descended. An occasional remark about cholera comes to us, but we know nothing of the malady thus far. We are authorized in saying that not a single case of cholera has appeared among us this season. The ordinary summer complaint of children does not seem to have been so common, and what we have seen, personally, has been, in almost every instance, traced to the eating of summer fruits, either in excess or unripe. The same remark may be applied to the diarrhœa and cholera morbus of adults; showing as we have always claimed, how much rests with the individual to maintain his health at a proper standard. Intemperance in eating is as much a vice as excessive drinking.

We owe much to the efficiency of the Board of Health. It has certainly taken hold of the sanitary questions with vigor and understanding. Our city has never been in better condition than now. The immense labor that has been performed is only half shnown by the record of the proceedings of the Board. We congratulate ourselves on the new system of hygiene lately introduced, and particularly on the ability of the men who now compose the Board. We do not mean to attribute everything to the Board of Health. Our present high state of health must be, in part, attributable to the absence of those unknown influences which produce disease. Let us be thankful that, so far, we have escaped the epidemic of last year, and look forward, trustfully, to the rest of the season, which, as it has bountifully supplied us with the necessaries of life, so will preserve us in a condition to enjoy them.

Poisonings in France.—From 1851 to 1862, 232 persons were poisoned in France by arsenic, 170 by phosphorus used in the manufacture of tobacco, 77 by sulphate of copper or blue vitriol, 33 by verdigris, 36 by sulphuric acid (oil of vitriol), 23 by cantharides, 6 by opium and 6 by hellebore. Eighteen other poisonings were effected by means of various other poisons.

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The Missouri Medical College has issued its Circular, as will be seen by reference, for the ensuing course of lectures. It has thoroughly reorganized, and has entered upon the field again with all the energy of its youth. Its corps of professors contains many prominent and old teachers, and others, though new to the business, yet fully equal to their duties. This is the oldest school of the West, and has always had a full share of the honors of medical teaching; and though not according with the views of the late Medical Convention of Medical Teachers, as we notice by an address of the veteran of the school, the Dean of the Faculty, Dr. J. N. McDowell, still we do not hesitate in saying that what the Faculty professes it will carry out in the fullest acceptation. There will always be at least two medical schools in St. Louis, and this will be one, and by no means the least prominent.

Bellevue Hospital Medical College, New York.—We would call the attention of our readers to the annual circular of the above for the session of 1867–8, in our advertising department. No medical school presents a more eminent list of professors, comprising the very best medical talent in the United States, and from the number of professors, and the immense clinical advantages possessed, offers more than ordinary inducements to students.

The Jefferson Medical College, Philadelphia.—This old and highly prosperous institution will commence the forty-third winter session in October next. No medical school in the United States stands higher or offers more inducements to medical students. The surgical and clinical advantages are abundant, and as teachers they have no superiors. The annual announcement, with further particulars, will be found in our advertising department.

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Beef curing by Venous Injection is practised by a firm at Corpus Christi, Texas, according to report, with perfect success. The blood is withdrawn by tapping the right ventricle of the heart; the animal having been stunned; after which the veins are forcibly injected with brine, through a hose, the nozzle of which is tightly inserted in an orifice in the left ventricle while the orifice in the right ventricle is closed. After filling, the right ventricle is opened, and allowed, under a continued pressure of brine, to run clear of the remaining blood. On making an incision at any point in the carcass, the brine spirts out the same as blood from the living animal, only with greater force. Even the hide is perfectly salted, and the carcass can be kept or transported whole as it stands, or skinned, cut up and packed, with perfect safety from decomposition.

VITAL STATISTICS OF ST. LOUIS.

From June 1, to July 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	188	Still Born	27
White Females	122	Under five years of age	143
Colored Males	18	Between five and twenty years	39
Colored Females	12	Between twenty and forty years.	78
Born in the United States	237	Between forty and sixty years	35
Born in Germany	46	Between sixty and eighty years	10
Born in Ireland	41	Bet. eighty and one hundred y'rs	3
Born in other countries	11	Total	335

DISEASES.

Accidents	10	Fever Typoid	26
Abscess	3	Fever Bilious	5
Apoplexy	10	Fever Puerperal	4
Asphyxia	1	Fever Remittent	5
Asthma	2	Fever Intermittent	5
Bronchitis	1	Fever Congestive	4
Burns	2	Gastritis	2
Carditis	4	Hepatitis	4
Cancer	4	Hydrocephalus	4
Cerebritis	18	Hemorrhage	2
Cholera Morbus	4	Labor	2
Cholera Infantum	8	Marasmus	15
Convulsions	12	Meningitis	17
Congestion of Brain	3	Paralysis	2
Cyanosis	1	Peritonitis	6
Croup	3	Poisoning	2
Diarrhœa	9	Pertussis	5
Drowned	3	Phthisis	35
Diphtheria	2	Pneumonia	32
Dropsy	3	Rheumatism	2
Delirium Tremens	2	Rubeola	3
Enteritis	3	Scarlatina	5
Erysipelas	2	Syphilis	2
Encephalis	2	Sunstroke	2
Epilepsy	1	Tetanus	2
Fracture	2	Wounds	4

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,

EDITED BY

J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, AUGUST 1, 1867. No. 11.

INVESTIGATIONS, CHEMICAL AND MICROSCOPICAL, RESULTING IN WHAT APPEARS TO BE THE DISCOVERY OF A NEW FUNCTION OF THE SPLEEN AND LACTEAL AND LYMPHATIC GLANDS.—*To-wit: The formation of Cholesterine, and the partial transformation of the Cholesterine of the Bile and Food into Seroline; with some experiments relating to the action of the Salivary Secretions upon Farinaceous Saccharine and Albuminous Products; some facts and inferences relating to the Lymphatics and the products of Parent Cells—The detection of Cholesterine in the several parts of the Eye and of Seroline in, and as an Excretion of, the Prostate Gland—Also discoveries, briefly referred to, connected with the important primary functions of the Spleen, and the Lacteal and Lymphatic Glands, Liver and Kidneys; with remarks on the office of the Epithelial Cells covering the Intestinal Villi.*

By J. H. SALISBURY, M. D., Professor of Histology, Physiology and Cell Pathology in Charity Hospital Medical College, Cleveland, Ohio.

[Communicated for the St. Louis Medical Reporter.]

Since the preparation of the paper on Experiments connected with the discovery of Cholesterine and Seroline, as secretions, in health, of the Salivary, Tear, Mammary and Sudoriferous Glands, of the Testis and Ovary, etc., published in the April number, 1863, of the *American Journal of the Medical Sciences*, I have extended the inquiries to the glands of the lacteal and lymphatic systems with what seems to be very interesting results, and which are detailed in the present paper.

INGESTION AND DIGESTION.

The first operation in these processes is the introduction of food into the mouth, which is an act of pure volition. It is there subjected to the process of mastication, by which the

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food is triturated and incorporated with the salivary secretions. This process is essentially automatic. The admixture of the saliva with the triturated food renders not only the subsequent process of solution more easy, but also appears to effect a change in the alimentary matters themselves. It has the power of exciting panary fermentation and of converting starch into sugar; but not the property of generating the alcoholic fermentation in saccharine solutions, although it excites in them a slow putrefactive change. This is exhibited by the following experiments:

EXPERIMENT 1. January 6, 1863.—Mixed two masses of wheat-flour dough, at 12 M. In one placed the common brewers' yeast at the time of mixing; in the other, at 1 P. M., one hour after, mixed in saliva; set both aside at a temperature of 75° F. At 2 P. M. the brewers' yeast dough began to rise; at 3 P. M. the saliva yeast dough began to exhibit like signs. At 12 o'clock at night they had both risen very light, the brewers' yeast dough slightly more than the other. On the following morning, eighteen hours after mixing the brewers' yeast dough, and seventeen hours after mixing the other, both had risen neither had any sour smell. On breaking open the masses, equally; the saliva dough had the carbonic acid uniformly mixed through it, while in the brewers' yeast dough a large proportion of the carbonic acid was immediately beneath the top crust, in a body. Both samples of dough were moistened, placed in porcelain dishes, and set aside, at a temperature of 65° F. Forty-eight hours after examined them with a microscope. No difference could be seen in the quantity of torula (yeast) cells each contained, nor in the amount of minute active germ and sperm and confervoid cells. Both samples emitted a sour odor; but the saliva dough stronger than the other. The saliva dough exhibited strong acid reaction, while the other gave evidence of but a slight excess of free acid.

EXPERIMENT 2.—At 2 P. M., January 8th, made four ounces of dough out of wheat flour and water, and worked in it one drachm of saliva, and set the dough aside at a temperature of

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about 80° F. At 3 P. M., one hour after mixing, the dough began to rise; at 10 P. M., it had risen quite light, as light as good brewers' yeast dough previous to baking. Let it stand till the following morning. At 8 A. M., eighteen hours after being mixed, it was baked. When done it had the appearance of fine light bread.

EXPERIMENT 3.—At 2 P. M., January 8th, dissolved two drachms of pure white loaf sugar in fifty drachms of pure water, and added one drachm of saliva, stirring it in well. The mixture was set aside at a temperature of about 80° F. At 10 P. M., eight hours after, no appearance of fermentation.

January 11th, 10 A. M.—No fermentation yet. The solution has been kept since the 8th, at a temperature ranging from 65° to 80° F. Added fifty drachms more of water, and set aside at a temperature of 80° F.

January 14th.—No perceptible alcoholic fermentation has yet taken place. The solution, however, has become milky, and has a peculiar rancid odor, resembling, somewhat, that of cheese. It has a slight acid reaction with litmus, and is still very sweet to the taste. There is evidently a slow putrefac tion, and, perhaps, a slight acetous fermentation going on. A microscopic examination revealed in the solution numerous actively moving zoosporoid cells, about the size, and a little larger, than ordinary torula cells. There were also many minute, active, sperm and germ confervoid cells. The mucous cells of the saliva had become elongated into loose granular filaments, around which were aggregated numerous minute algoid, sperm and germ cells, and many zoosporoid bodies.

It was found on adding saliva to meats that it accelerated, somewhat, putrefactive fermentation. It has, however, much less influence upon albumen than upon farinaceous matters.

This might, perhaps, have been inferred from the fact that carnivorous animals, that subsist almost entirely upon animal (albuminous) matters, simply tear their food, and swallow it in lumps, without trituration or incorporating it with saliva to any great extent; while all animals that subsist, either par-

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tially or wholly, upon farinaceous and saccharine products, triturate their food, and thoroughly incorporate it with saliva before it is subjected to the action of the gastric juice.

With the introduction of food into the stomach commences the digestive process. The presence of food in this organ excites a secretion from its glandular lining, which is called the gastric juice. This secretion acts as a solvent to the food. The only change the food has undergone, chemically, previous to its being submitted to the solvent action of the gastric juice is that which is effected by the admixture of saliva in the mouth. This saliva possesses the power of converting starch into sugar, and of exciting incipient changes in albuminous matters, but has apparently but little power, as we have before seen, of exciting, in a solution of sugar, the alcoholic fermentation, although it appears to excite this more rapidly in moistened wheat dough, raised by it, as would appear evident from the multiplication and development in it of torula cells, as is shown in the preceding experiments. The chemical action of saliva upon the food, commenced in the mouth, is supposed to be checked on its arrival in the stomach by the acid character of the gastric fluid. It again commences, however, after the food has arrived in the small intestines, and has become neutralized by the action of the biliary secretions.

The mucous membrane of the mouth, fauces and œsophagus, and that of the parotid, sublingual and sub-maxillary glands, are lined or covered with a compact layer, closely set, of epithelial cells, the office of which is to organize and set at liberty the salivary secretions, which are the first of the digestive fluids to be incorporated with the food.

The stomach is thickly studded with tubular glandules, opening upon its free surface. These terminate at the other, blind extremities, on the under surface of the mucous membrane. Among those blind terminations are scattered sparsely a peculiar class of closed follicles. The tubular glandules are thickly set or lined with parent epithelial cells, the office of which is to assimilate, organize and discharge into the stomach the gastric

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digestive fluids. These gastric digestive fluids are known by the name of *gastric juice.* It contains a peculiar proximate organic body called *pepsine,* which is endowed with the property of exciting gastric fermentation, by which, with the muscular contractions, the albuminous, caseous and fibrinous ingredients of the food are dissolved and transformed into a peculiar body, differing from either, and known as *albuminose.* During the fermentation excited by *pepsine* an odor is exhaled somewhat like that of malting barley. An acid condition is necessary in order to have this peculiar body excite fermentative action. This seems to be a peculiarity of this ferment, which makes it differ from both the salivary and intestinal secretions (ferments). The office of gastric digestion, then, appears to be to dissolve the fibrinous, caseous and albuminous constituents of the food. The gastric solvent, at the present state of our knowledge, is believed to consist in free acids (hydrochloric and lactic) and a peculiar yeast product (pepsine) which acts as a ferment in effecting solution. This solution is aided by the successive muscular contractions and relaxations of the gastric walls. Little by little the alimentary materials are reduced to a homogeneous, pulpy mass, called chyme; this passes into the duodenum, as soon as formed, through a valvular (pyloric) orifice, which closes itself to solids. The chyme is usually a homogeneous fluid, grayish substance, having a slightly acid taste, but otherwise insipid. When the food is oily, the chyme has a creamy appearance; but when farinaceous, it resembles gruel.

The fibrinous, caseous, glutinous and albuminous products, derived from animal and vegetable food, are reduced, by solution, to the condition of the so-called *albuminose.* Farinaceous matters are not dissolved, unless the salivary secretions have produced certain changes in them. Sugar is reduced to complete solution, and transferred at once to the intestines. Oily matters are reduced to minute particles, and become mixed with the other constituents of the chyme.

Insoluble products, such as woody fibre, cellular, resinous,

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horny and bony matters, yellow fibrous tissue, epidermic and other thick-walled cells, pass unchanged from the stomach, undergoing no subsequent changes in the intestinal canal, and are voided as part of the fœces. The epithelial surface of the intestinal canal is greatly increased, like that of the stomach, by means of *tubular glandules*, which are known as the "follicles of Lieberkuhn," and the duodenal glands of Brunner. The former occur in great numbers, occupying the whole thickness of the mucous lining, and are found throughout the entire length of the small and large intestines; the latter are confined to the upper portion of the duodenum. These glandular tubules are lined by the extension of the parent epithelial cells, that line the whole intestinal canal, and greatly increase the surface that performs the all-important office of organizing the products which are to produce the fermentative and other changes, that fit the nutrient materials to be taken up as food by the epithelial cells, and transmitted by them to the intestinal villi, and capillary and lacteal cells beyond. When the digested albuminous matters, and those other portions of the food not digested, consisting of farinaceous, saccharine and oily products, pass from the stomach into the small intestines—the third division of the alimentary canal—they come in contact with the pancreatic and biliary secretions, and the intestinal juices, organized by the epithelial glandular surfaces. The oily matters in the duodenum, coming in contact with the pancreatic secretion, are disintegrated and reduced to a fine state of division or to a complete emulsion. The important ingredient of this emulsion is called *pancreatine*.

The farinaceous bodies, in this third division of the alimentary canal, come in contact with the "intestinal juices," secreted by the epithelial glandular tubules and cell surfaces, which, with the salivary secretions previously incorporated with the food, excite active saccharine fermentation in them, and they are rapidly converted into sugar, which largely abounds in the large intestines.

The experiments of Bidder and Schmidt show that the bile is

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not an excrementitious product, as some have supposed, but one that performs an important function in digestion and assimilation, as is evident from the fact that it has been found of vital importance to continued animal existence. What its precise office is has not been yet satisfactorily determined. It would appear, however, at this stage of investigation, that its office is closely connected with the assimilation and appropriation of hydro-carbonaceous matters, as dogs deprived of this secretion, by artificial fistulæ, either die immediately or rapidly become emaciated, and finally die from exhaustion.

ABSORPTION.

The so-called absorbent system proper is made up of two principal sets of vessels. One, commencing upon the walls of the intestines, and is termed the lacteal system, from the milky character of the chyle which it contains, whilst the other takes its origin in the various parts of the organism at large, especially in the skin and subcutaneous textures, and is known as the lymphatic system from the transparent, watery appearance of the liquid it conveys. Although the walls of the whole gastro-intestinal apparatus are furnished with so-called absorbent vessels, yet it is in those of the small intestines that the lacteals especially abound. They seem to originate in the interior of the villi, where their free ends are covered by a tunic or plexus of capillary blood vessels that lie immediately beneath the external surface of these filamentous processes. The walls of the so-called absorbent vessels are extremely thin, so that the character of their contents can readily be discerned through them. They are abundantly provided with valves, so arranged that their contained fluid can pass only in one direction.

The lacteals all discharge their contents, after being partially organized in the lacteal glands, into the *receptaculum chyli*, which is situated in the lumbar region, close to the spine. Into the same receptacle many lymphatic trunks pour their partially organized products, which they have collected from the

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posterior of the trunk and extremities. From it arises the *thoracic duct* of the left side, which passes forward along the spine, receiving other lymphatic trunks in its course, and terminates at the junction of the left jugular and subclavian veins. A similar trunk, on the right side, receives the lymphatics of the right side of the head and upper extremities, with those of the right lung and right side of the liver, and this terminates, in like manner, at the junction of the right subclavian and jugular veins.

It was formerly supposed that the lacteals constituted the channel through which all fresh nutritive materials entered the body. It is now, however, believed that the more soluble portions of the alimentary materials are taken into the blood vessels direct without passing through an *intermediate lacteal system*.

The contents of the lymphatics is believed to be made up of the residual fluid, which having escaped into the tissues from the blood vessels is not appropriated, together with particles of the solid framework, which having lost their vitality and become useless to their tissues, and which have not undergone such a degree of decay as to unfit them for nutrient purposes, but, like the materials of animal food, are susceptible of being assimilated so as again to be appropriated by the system.

Another set of organs closely connected with the process of the so-called absorption are the intestinal *villi*. Each villus is made up of an external layer of columnar, parent epithelial cells, inside of which is a layer of capillary vessels, within which a lacteal vessel takes its rise.

Dalton, in his Human Physiology, p. 147, says: "Villi are the active agents in the process of absorption. By their projecting form, and their great abundance, they increase enormously the extent of surface over which the digested fluids come in contact with the intestinal mucous membrane, and increase, also, to a corresponding degree, the energy with which absorption takes place. They hang out into the nutritious, semi-fluid mass contained in the intestinal cavity, as the

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roots of a tree penetrate the soil, and they imbibe the liquefied portions of the food with a rapidity which is in direct proportion to their extent of surface and the activity of their circulation."

Absorption of the nutrient materials of the intestines takes place both by the blood vessels and the lacteals. The fatty matters, with which are incorporated intimately albuminous products, are taken up by the lacteals, while the saccharine, and a portion of the albuminous matters, are absorbed by the fusiform cells of the capillaries of the villi. It is very evident that albuminous matters are taken up by the lacteals with the fatty products, from the fact that after the absorbent matters have passed through the lacteal glands, multitudes of fibrin cells, and their resultant filaments, and their nuclei, nucleoli and granules are discerned in the lacteals, receptaculum chyli and thoracic duct. The fibrin cells are even discoverable in vast numbers in the lacteal glands, in process of formation. They are also now found in the perfect mature state, and in their various stages of metamorphosis into filamentous fibrin and blood discs.

The minute granules that are so abundantly present in the receptaculum chyli and thoracic duct, and which have been supposed to be the fatty products, are many of them the minute cell contents of the fibrin cells. The lacteals, however, make up only a portion of the universal lymphatic system which takes its rise from all parts of the body, save the nerve tissue and epithelial cells and appendages. The parent epithelial cells, covering the external surface of the villi, are the primary active agents in the so-called absorption. They are the bodies through which all the nutrient matters of the food have to pass ere they reach the blood vessels and lacteals. In these cells the initiative step of assimilation and organization is taken, which is still further advanced in the more highly animalized parent cells of the lacteal glands. We hence see how important it is that these parent epithelial cells, covering the villi, should be kept in a healthy condition, and what would

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be the consequence if extensively diseased. They are the avenues through which most of the nutrient matters pass that go to build up and nourish the tissues. If irritated by morbific matters, or extensively deranged, or abraded by contents or poisons, we can at once appreciate the dangers of such abnormal conditions.

There has much been said about endosmotic, osmotic and exosmotic action in connection with absorption. These peculiar physical processes, however, we must not fall back upon in explaining the operation of absorption by the intestinal villi and other animal membranes covered with living parent cells.* The layer of columnar epithelium, covering the intestinal villi, is composed of a multitude of organisms possessing a life independent of the animal to which they are attached and which they envelope. They are analagous to vegetable organisms of the zoosporoid type, and may be said to occupy a position midway between vegetable and animal structures, and constitute the connecting link between these two organic kingdoms. Their office in the animal economy appears to be to assimilate and organize matter so that it will serve as food for the more highly animalized tissues. There is a successive series of living parent cells, so arranged that what is not organized in the first passes on and is operated upon by the second; if any passes the second series, a third stands ready to organize and assimilate it, etc.

The front or mouth end of the cells covering the villi, is in the direction of the intestinal cavity, and the posterior side or exit, in the direction of the capillary vessels and lacteals. They receive nutrient matters at one end, organize those products

* This is a process of cell feeding. These cells maintain their vitality in membranes long after animal life is extinct, or long after they are separated from the living animal organism. The extent to which the vitality of these cells produces the peculiar so-called endosmotic and exosmotic action, above that of the same membranes where the cells are dead, presents an interesting field of inquiry. The vitality of the cells can be readily determined by placing them from one to three days at a temperature of from eighty to one hundred degrees, in a nutrient solution, like that which ministered to their support during their connection with the living animal. If vitality is extinct no movement will be perceptible; if not, there will be more or less motion connected with the contents of the epithelial cells. This absorption, peculiar to living cells, (a simple process of cell feeding) should not be confounded with the more mechanical endosmotic and exosmotic forces of dead membranes.

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that are necessary for their support, and transmit the balance at the opposite end, so modified that it can act as food for the parent cells of the capillary and lacteal extremities. So far the products are all fluid. Those taken up by the capillary vessels enter the red blood stream, and pass to the spleen and liver, where they are organized into cell, and filamentous, and other products, for the use of the highly animalized tissues. Those that enter the lacteals are transmitted to the lacteal glands, where they are organized in a similar manner, for a similar purpose.

Those unorganized products that escape through the systemic capillaries, with the organized nutrient matters destined to supply the waste of and build up the tissues, are taken up by the systemic lymphatic extremities, with disintegrated, worn out materials, and transmitted to the lymphatic glands, where they are organized into cell, and filamentous, and other products for systemic support.

The liver also performs an important part in organizing fibrin from albuminous materials, which will more fully appear in the article on the structure and functions of this organ. The lacteal system, including the covering of the intestinal villi, appears to perform but a preliminary part, at least, so far as albuminous matters are concerned, in the organizing and assimilating process, and their contents appear further removed from the vitality of the tissues than the matters in and being organized by the lymphatics. In support of this view I will mention some well established facts:

1. Bodies (morbific and virulent matters) introduced into the system through the stomach with the food, although taken up with it by the lacteals, do not manifest their specific influence upon the organism with that promptness and intensity that they do when introduced by inoculation into the sytemic capillaries, showing that they come in contact here with matters more highly organized and vitalized than the chylorous products of the lacteals.

2. When such bodies are introduced into the systemic capil-

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laries, the first abnormal indication consists in radiating red lines (inflamed lymphatics) emanating from the inoculated point, marking the course of the lymphatics, showing that in them the deleterious influence first manifests itself. Through them it is transmitted to the whole system. Organs for the transmission of effete products soon expel them. Their tendency is out of, instead of into, the body; away from, instead of to, the nutrient vital points.

8. In all cases of blood poisoning, the lymphatics are the primary seat of the fatal lesions. The lymphatics appear to be vital organs, the healthy action of which appears to be necessary for extended existence. Apparently slight lesions or derangements in them prove fatal. They constitute the channels through which medicinal agents and poisons can be made to act with greater promptness and intensity upon the system than through any other. They seem to be most intimately connected with the vital functions.

NUTRITION AND SECRETION.

A saccharine compound is formed by the lobular cells of the liver. This function was first discovered by M. Claude Bernard, in 1848, and described by him under the name of the *Glycogenic Function of the Liver.*

It has long been known that the sugar of milk may be found in the animal body when no vegetable products are taken with the food, and that diabetic sugar is largely found in the human subject under similar circumstances, when laboring under diabetes. The experiments of Bernard and others have pointed out the internal source of this animal sugar—it mostly originating in the hepatic tissue. It appears to be one of the important constituents organized during hepatic cell development. In nature and properties, liver sugar closely resembles glucose, or the sugar of starch, sugar of honey, or the sugar of milk, though not exactly identical with either of them. When exposed to a temperature of from 70° to 100° F., and mixed with yeast, it ferments readily. Its solution reduces the salts

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of copper, in Trommer's test. It, unlike other sugars, decomposes with great readiness in the blood. If cane or grape sugar be injected into the circulation of the living animal, it circulates through the system unchanged, and is finally voided in the urine. Sugar of milk and glucose, however, if introduced in moderate quantity, are decomposed in the blood; but if in a large qnantity, a portion is eliminated unchanged with the urine, while a solution of liver sugar, though injected in a much larger quantity than either of the others, may disappear altogether in the circulation without being eliminated by the kidneys. It is hence inferred that liver sugar has an animal origin, and that the system does not require saccharine or even farinaceous food for its production. M. Bernard has found that if all the sugar contained in a fresh liver be extracted by a prolonged watery injection, so that neither the water which escapes by the hepatic vein, nor the substance of the liver itself, contain any further traces of sugar, and if the organ be then set aside for twenty-four hours, both the hepatic tissue, and the fluid which exudes from it, will be found to have again become highly saccharine. It is hence evident that the sugar does not come from the blood circulating through the hepatic tissue, but must originate in the hepatic cells as a product of their development.

Liver sugar is produced by the transformation of another peculiar substance of previous formation in the hepatic tissue, which is known as *glycogenic matter* or *glycogene*. This glycogenic matter appears to be intermediate in its properties and nature between hydrated starch and dextrine. Its ultimate composition, according to M. Pelouze, is $C_{12}\ H_{12}\ O_{12}$. Iodine produces with it a color varying from a violet to a deep, clear maroon red. It does not ferment with yeast, nor does it reduce the salts of copper in Trommer's test. It is, however, readily convertible into sugar by the saliva and other animal ferments, as, for example, those in the blood, where it becomes fermented with yeast, and readily reduces the salts of copper in Trommer's test. The formation of liver sugar, then, is a

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function involving two distinct processes; first, the formation of glycogenic matter, having some resemblance to dextrine; and secondly, the transformation of this glycogenic matter into sugar.

The liver sugar, after its formation, enters the circulation, where it rapidly disappears. What its precise office is after entering the vascular system is not known. Lehmann and Robin suppose that it is first transformed into lactic acid ($C_6 H_6 O_6$) which in turn decomposes the alkaline carbonates, setting free carbonic acid, and forming lactates of potassa and soda. At the present stage of investigations, however, these views are entirely conjectural.

Chyle that is drawn from the lacteals of the intestinal walls does not spontaneously coagulate, and hence we may infer that it is quite free from fibrin. It coagulates with heat and acids, which demonstrates the presence of albumen in complete solution. It also contains undissolved fatty matter in a fine state of division. M. Gulliver has shown that the milky color of the chyle is owing to an immense multitude of minute particles, which he has described under the name of *molecular base of the chyle.* This molecular base varies greatly, at different times, and with the food eaten. As it is insoluble in ether, it is inferred to be oleaginous. After the chyle has passed through the mesenteric glands it exhibits very marked changes. The fluid now begins to show very marked indications of spontaneous coagulation, demonstrating the presence of fibrin. The molecular base of Gulliver has very much diminished, and many large cells, resembling the colorless corpuscles of the blood, now, for the first time, make their appearance. These colorless corpuscles are very abundant after the chyle has passed through the mesenteric glands. The spontaneous coagulation of the chyle that is drawn from the lacteals between the mesenteric glands and receptaculum chyli is so complete as to produce a perfect separation into clot and serum. That drawn from the receptaculum chyli and thoracic duct, coagulates still more perfectly, resembling more strongly the clotting of blood.

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The fluid of the lymphatics (lymph) is much more transparant than that of the lacteals. It contains cells resembling those of the thoracic duct and the colorless corpuscles of the blood. These cells in the lymphatics are numerous, after the lymphatic fluid has passed through the lymphatic glands. Lymph coagulates like blood; a colorless clot being formed enclosing the greater part of the corpuscles. The lymph differs from the lacteal fluid in the absence of fat and the smaller proportion of solid matter, fat being an important constituent of the latter. Similar functions are supposed to belong to other vascular glands, without ducts, which are in intimate relation with the lymphatic system. These are the spleen, and the thymus, and the thyroid glands.

It has long been noticed that the chylous contents of the lacteals, before it passes through the lacteal glands, is free from fibrin, but as soon as it passes through these glands fibrin manifests itself in considerable quantities. It has also been noticed that the lacteal glands form a peculiar class of cells, resembling the colorless corpuscles of the blood. By a long series of experiments and microscopic examinations, conducted with great care and patience, it has been determined that it is one special office of the lacteal glands to manufacture fibrin cells. These fibrin cells are analogous to the colorless corpuscles of the blood, and contain a large central nucleus, around which are many minute cells. Ere these cells escape from the lacteal glands, many of them, the majority, undergo a filamentous metamorphosis, or are developed into fibrin filaments, all but their large central nuclei and the surrounding minute cells. These filaments are "spun" so fine that they are almost imperceptible with the aid of the best glasses. The large central nuclei appear, in the receptaculum chyli and thoracic duct, withered, wrinkled and irregular in shape, and look very unlike the bodies they are destined to form. These withered nuclei of the fibrin cells, after being exposed to certain influences and metamorphosis, which will be described when treat-

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ing of the blood, and the structure, and functions of the glands, etc., become blood discs.

The filaments emanating from the filamentous metamorphosis of the fibrin cells, constitute a portion of the fibrin of the blood. The study of the filamentous metamorphosis of the fibrin cells of the *lacteals, spleen, liver* and *kidneys*, has led to the interesting discovery that all these glands contribute to the formation of the fibrin of the blood. That all the fibrin of the blood is formed from fibrin cells, developed in the glands just mentioned, by a filamentous metamorphosis. That these cells are "spun" into filaments so fine and highly transparent, that it is almost impossible to detect their presence; that the blood in the living body is filled, not with liquid fibrin, as is generally supposed, but with these fine filaments, forming a delicate mesh work; that what is called the clotting of the blood is merely the gradual contraction and aggregation of these delicate fibrin filaments. By the contraction of the filaments the meshes become so small that the blood discs and colorless corpuscles will not pass through them, and there results a mass of clot, more or less firm, made up of a fine meshwork of filaments, holding most of the colorless corpuscles and blood discs in its meshes.

The discoveries resulting from the present examinations show, both by structure and function, how it is that in the liver the biliary secretions go to the gall bladder, and the fibrin and glucose enter the blood vessels. The great and important function of the liver is the formation of fibrin and glucose, which enter the blood vessels, while the minor or incidental function is the formation of bile. The great mass of the parent cells of the liver are engaged in the former function, while the few perform the latter. The increase of fibrin in the blood, during its passage through the liver, is accomplished by an organizing process in the parent gland cells of the arterial extremities.

(To be Continued.)

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OBSTETRICAL SHOULDER PRESENTATIONS.

By Edwin R. Maxson, M. D.

About the first of January, 1863, while practicing in Geneva, N. Y., I was consulted by Mrs. ———, of that town, a Scotch lady, about thirty years of age, short, thick set and robust. She stated that she was pregnant, and approaching her full time; and that her concern about her condition depended upon the fact of her having borne three dead children, at full time, from shoulder presentations; her physician having told her that her peculiar *build* was probably the cause, making her fear that her next confinement would be attended with no better result. And I confess, that on a survey of her form, being so very large, and yet so short, I could not conscientiously give her any encouragement that such might not be the case. Her physicians had very properly, in her three confinements, turned and delivered; the children being large and all born dead.

She requested my attendance, when her full time should come, and expressed a hope that I might do something to avert the sad result of her previous confinements, and save the child; the process of turning and delivery, as it appeared, though skilfully performed, having caused the death of the children, in consequence, probably, in part, of their large size. I dismissed her with a few words of encouragement, telling her that I would consider her case, which I did, in this wise.

Soon after this I was called by an eminent practitioner, in consultation, in the case of a *prolapsed cord*, in a first confinement, there being also an *abdominal presentation*, of course, very high. The patient had been in labor five hours, and the membranes had been ruptured three hours, most of the water having drained off. To reduce or replace the cord, in this case, I placed the woman in the position first suggested, I believe, by Dr. T. G. Thomas, of New York; that is, upon her knees, with her face and shoulders down. In this position I very soon succeeded in passing the cord back into the uterine cavity. In fact, it readily slipped back, with the aid of very slight manipulations. But what impressed me most in this case was the fact that the position of the patient, during the replacement of the cord, had corrected the presentation, rendering it perfectly natural. I say the position of the patient did this, from the fact that the manipulation I resorted to, in putting back the cord, was so very slight, that I regarded the position of the patient, alone, as the cause of the very desirable result. I jogged the hips a little, however, which may have had a slight influence in correcting the presentation of the fœtus, as well as in the replacement of the cord. The labor

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progressed naturally thereafter, as I learned, though the child was still-born, perhaps on account of the *time* the cord had been prolapsed.

I did not take to myself any credit for the correction of the presentation, in this case, as it was accidental and unexpected, though we were not sorry for the result, and I treasured up the fact in my mind, as well as recorded it in my note-book, from which I now draw the main facts, being determined, if possible, to turn it to account sometime, which I did in the following case, already referred to. On the 6th of February following, the husband of the lady first named came, about 10 o'clock at night, saying that his wife was confined, and asked my attendance. But as I had been up for two or three nights, I advised him to call my medical friend already referred to, with whom I held consultation in the case of prolapsed cord, saying to him, that should any difficulty arise, I would see her with him. To this he assented, and I went to rest, feeling that she had fallen into good hands, let what would come of it.

About 2 o'clock in the morning I was called by the husband, saying, the doctor would like to see me, as there *was trouble.* The doctor informed me that he had a shoulder presentation, and that the water had drained off. I examined, and found as he had stated, the arm not being down. The doctor very properly suggested turning and delivery; but added, that as as the child was evidently large, it would be lost, as the others had been. On a little reflection, during which I called to mind the case of mal position with prolapsed cord, which I had so recently succeeded in correcting mainly by *position,* I suggested the *possibility* of correcting the presentation in this case by position and gentle manipulation, to which the doctor assented, saying it would do no harm, but thought it would not be successful. But feeling, as I did, a little *special* responsibility in the case, on account of having been previously consulted by the lady, I resolved, with the doctor's consent, to make the effort, which I did in the following manner:

I had her get upon her knees, on pillows, upon the bed, so as to raise her hips up well from the bed, her chest and face lying flat upon the bed, fetching the back at an angle, with it, of about forty-five degrees, the knees being a little apart; I then passed my hand, well smeared with lard, into the vagina, and with scarcely any effort, and without the least complaint or evidence of uneasiness on the part of the patient, crowded back, and, of course, *down,* in her position, the shoulder, and slipping my hand between the brim of the pelvis and the fœtal head, I spread out my fingers and brought or directed it, during a pain, to the superior strait; and then, retaining the grasp,

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we had her turn her hips down carefully upon her left side on the bed; when, after a pain or two, the head engaged in the superior strait, and we had a perfectly natural presentation, without having used the least violence, or apparently caused any pain or uneasiness to the patient; and all accomplished, I should judge, within from five to ten minutes.

The doctor being satisfied with the presentation, I left about 3 o'clock, A. M., and learned from him that the labor progressed favorably, and terminated at 9, A. M., or about six hours after I left, the child being a fine plump boy, of ten pounds, alive and well.

Now, the ease with which the hand is passed into the vagina and uterus, with the patient in this position, is wonderful, and will surprise any one that has never made the effort.

I have delayed reporting this case, except in the Ontario County Medical Society, up to this time, thinking that other cases might present themselves to me whereby I might more fully test this method of proceeding in shoulder presentations. Such, however, has not been the case; and thinking, possibly, that I might not meet with other cases, I concluded to thus make a plain statement of the facts which led me to this experiment; and also my firm conviction, from the result of this case, and from philosophic reasoning, that with this *position* there need generally be no difficulty in thus converting a *shoulder presentation* into a *natural* one, and that, too, without necessarily subjecting the woman to any danger, from the slight manipulation required, or to scarcely inconvenience even, thus rendering the life of both mother and child so much more secure than they can possibly be by turning and delivery in the usual way, however skilfully it may be performed. What I claim to have *discovered* in this method, is the availability of the position suggested by Dr. T. G. Thomas for replacement of the prolapsed cord, in the conversion of *shoulder* into *natural* presentations.

It is not pretended that this can be accomplished in all stages of labor or conditions of the parts. But that in all *conditions* of the parts, and *stages* of labor, admitting of turning and delivery, the presentation may thus be corrected, with much less difficulty, and with far more *safety to mother and child.* In fact, no danger need be incurred in the effort required to thus correct a shoulder presentation, while, to say nothing of the danger of lacerating the uterus in turning, all obstetricians are aware of the danger attending cases in which the feet present or are brought down, as in turning, from pressure of the head on the umbilical vein and arteries, before its expulsion, producing, in many cases, the death of the child from apœa. For the greater *safety of mother and child,* then, I suggest a trial of

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this course of proceeding in shoulder presentations. And while I do not believe it can be accomplished without the *position*, which really does most of it, I am confident, that with prudence and the exercise of common sense, no one need fail, with the aid of the position, in any case, stage or condition of labor, that would admit of turning and delivery. And though the cases referred to may not be sufficient to establish this course of proceeding in shoulder presentations, I do claim, that as the principles are purely philosophical, further *trial* is warranted, which may reject or establish the *rule.*—*Medical and Surgical Reporter.*

EMPLOYMENT OF CHLOROFORM AS A THERAPEUTIC AGENT, WHEN TAKEN INTO THE STOMACH.

By E. McCLELLAN, M. D., Assistant Surgeon and Brevet Major, U. S. A.

The internal administration of chloroform in the treatment of delirium tremens and other neuroses, which has lately been revived with much success, is by many medical gentlemen considered a procedure of questionable propriety. These doubts of the therapeutic value of this drug arise, in the majority of instances, from the fatality which has attended its use as an anæsthetic agent. But objections are frequently advanced upon the ground that the exhibition of chloroform sometimes fails to relieve insomnia, and the consequent delirium, and that not unfrequently it induces free emesis, in place of acting as a remedy for nausea and vomiting

It would indeed be strange, if among inebriates, who unfortunately compose a numerous class in every large community, idiosyncrasies were not observed, and if in the treatment of that disease to which they are liable, any proposed remedy should invariably produce the same results; but if in a majority of a given number of cases a decided and beneficial action is obtained, the cause of failure in the minority may as justly be sought in the individual, or in extraneous causes, as in the drug. Thus chloroform, which has been highly considered in the treatment of nausea and vomiting, produced by sea-sickness, pregnancy, and nervous irritation from other causes, may, when containing impurities, only aggravate the disorders for the removal of which it is administered. On the other hand, idiosyncrasies may be combated in vain, since they are not to be overcome; the instances are so well known of certain drugs, harmless to the many, but exercising invariably an unpleasant influence over a few, that any enumeration would be unnecessary. In a somewhat extended experience, in which the remedial power of chloroform has been carefully

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observed, very few instances have occurred in which its administration caused vomiting; and even in these cases, with but one exception, the same amount having been repeated, after a short interval, was retained, and produced the desired effect. Of the instance in which it became impracticable to continue its employment, the cause was found in an intense repugnance which the patient conceived, and which became so strong, that from that time the etherial flavor invariably produced nausea and vomiting.

It may be safely accepted, that an overdose of chloroform would most likely be quickly ejected by the stomach. To this fact are to be attributed the very few instances on record in which death has resulted from over-doses, which have been taken either from accident or from criminal purposes. Still, this proposition must admit of qualification, since chloroform has produced violent poisoning in some cases on record—in a few others death.

In the successful employment of chloroform as a remedial agent, much stress has been laid, by observers, on the great variations which may be made from a standard dose. A fluid-drachm, which in the majority of adults will procure sleep, being taken as a standard, it may be increased or diminished *pro re nata;* but in those cases which indicate the production of a decided hypnotic effect, it is certainly advisable to bring the patient rapidly under its influence. In fact, it will be found that among the most frequent causes of failure in the use of chloform, are the insufficient doses exhibited, and the length of the interval between them on their repitition.

The impunity with which chloroform may be given in large doses has been frequently illustrated within my observation, and its application has not been confined to delirium tremens alone. In a case of epidemic cholera, occurring in a delicate female, who was in collapse, pure chloroform, in drachm doses, was four times administered, at intervals of ten minutes, with the most decided beneficial results. The cramps, vomiting and purging were arrested, after which the remedy was repeated in half drachm doses every thirty minutes, for two hours, when reaction was fully established. But still more encouraging has been my experience of the advantages to be derived from its exhibition in full doses, at the inception of disease; and especially does this refer to the treatment of delirium tremens.

It is imperative that chloroform about to be ingested should be chemically pure, as the employment of a specimen which has been adulterated with ether or alcohol, or one in which decompositions has taken place, or in which the heavy volatile oils are present, will either yield negative results or may be positively injurious. In order to avoid this danger, whenever

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a doubt exists, the specimen should certainly be subjected to various tests.

Care should always be taken, when about to administer chloroform by the stomach, especially to persons of a delicate organization, that it should be suspended or enveloped in some vehicle which will disguise the pungent sweetness of its taste, as from it alone nausea, vomiting, or an intense antipathy may arise. To others, less sensitive, a small quantity of iced water will be sufficient, for the stimulation of the mouth and fauces, as the remedy passes, is but momentary, not more unpleasant or powerful than the same amount of pure alcohol would be to an uneducated surface; and when it reaches the coats of the stomach, the sensation, being that produced by a diffusible stimulant, is, in the majority of instances, a pleasing one. That pure chloroform can not long remain inert, when taken into the stomach, will readily be conceived from its physical properties. Impelled by its specific gravity it must pass quickly from the stomach into the intestinal canal, and, through its peculiar volatility, is soon converted into vapor. These characteristics renders its absorption not only more prompt than those of the majority of other remedies, but more certain, even when the vital powers are all but exhausted. The rapid penetration of the densest tissues by chloroform vapor, and its power as an antiseptic, have been established by the experiments of Augend and Robin.

The effect produced by chloroform upon the nervous system can at best be ill defined. That it it acts peculiarly for the relief of disordered nerve ganglia, that it diminishes congestion in its varied forms, and that it differs materially in its operation through the stomach, from its action as an anæsthetic through the lungs, is evident from the results obtained.

Administered to the digestive organs it acts as a diffusible, stimulating hypnic, possessed of diuretic and diaphoretic properties, and, when taken in unusual doses, as an inebriant and irritant. Its therapeutic action is peculiarly that of a neurotic, and, influenced by the extent to which it is administered, may be employed to rouse the nervous system when depressed, and to tranquilize it when over-excited; or in other words, its contact with the nerve centres is sufficient to restore to them the power of recovering their equilibrium, and of re-establishing their normal influence over dependent structures. This is shown in delirium tremens, the delirium of fever, insomnia, and diseases of that class, by the natural, not comatose or anæsthetic, sleep, which will continue for hours after the quantity introduced through the stomach into the system has been eliminated. Its power is further shown in the cold stage of intermittent fever, and in the various rigors which the nervous

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depression, with its distressing symptoms, is relieved, and reaction established. Also, in epilepsy, infantile and puerperal convulsions, painful spasmodic affections, and kindred disorders, it is manifested by the rapidity with which the brain recovering from its temporary irritation, the convulsive or spasmodic movements are arrested. But still more striking is the power exerted over congestion, by restoring the tonicity of the blood vessels, and thus relieving the local hyperæmia.

Such exhibition of chloroform does not, in the majority of instances, derange or impair the digestive power; but reversely, its effect, again, by ganglionic influence, is that of a "food tonic," and in certain impaired or depraved conditions of the system, even in those whose chief characteristic is extreme irritability of the stomach. After its exhibition large quantities of concentrated nourishment is eagerly received. This craving for food, or ability to receive, retain and digest unusual amounts of nourishment, is, in such cases, due to the chloroformic awakening of the great life centres to the requirements of the system, and should not be counteracted by other means than the natural stimulus of the body—*food.*

Perhaps one of the most interesting exhibitions of the power of chloroform is the rapidity with which, acting as a diuretic, it removes bile from the blood and skin. In a case of jaundice, in which the entire surface of the body was tinged, I gave cloroform in drachm doses every three hours. The diuresis was excessive on the second day; the skin and conjunctiva were nearly clean, and by the termination of the third, the elimination was complete. The affinity which exists between chloroform and bile has led the former to be suggested as a test of the presence of the latter.

The experience of such cases indicates that the elimination of ingested chloroform occurs mainly by the kidneys, and that the medium of the lungs and skin is but little employed. This theory is resolving itself into a fact, despite the contrary assertions of *theoretical experimenters.*

Fully satisfied that observation will convince the most sceptical that chloroform may be internally employed, not only without endangering life, but with advantage as a remedial agent, I have ventured to submit to the profession the foregoing remarks upon its internal administration in a few of the many forms of human suffering which it is most probably destined to relieve.—*N. Y. Medical Record.*

THE DEAD OF THE MEDITERRANEAN.—The whole channel of the Mediterranean must be strewn with human bones. Carthagenians, Syrians, Sidonians, Egyptians, Persians, Romans and Greeks—there they lie, side by side, beneath the eternal waters, and the modern ship that brings freight from the Alexandria, sails in its whole course over buried nations.

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RESTORING PERSONS WHO HAVE BEEN APPARENTLY DROWNED.

The British Royal Life-boat Institution has promulgated some excellent remedies, which are used in the British navy, for restoring the apparently drowned, and which are valuable to keep in mind for instant use in such cases:

1. Send immediately for medical assistance, blankets and dry clothing, but proceed to treat the patient instantly on the spot, in the open air, with the face downward, whether on shore or afloat; exposing the face, neck and chest to the wind, except in severe weather, and removing all tight clothing from the neck and chest, especially the braces.

The points to be aimed at are—first and immediately, the restoration of breathing; and secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to restore breathing must be commenced immediately and energetically, and persevered in for one or two hours, or until a medical man has pronounced that life is extinct. Efforts to promote warmth and circulation, beyond removing the wet clothes and drying the skin, must not be made until the first appearance of natural breathing; for if circulation of the blood be induced before breathing has commenced, the restoration of life will be endangered.

2. To restore breathing, clear the throat, place the patient on the floor or ground, with the face downward, with one of the arms under the forehead, in which position all fluids will more readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance to windpipe free. Assist this operation by wiping and cleansing the mouth.

If satisfactory breathing commences, use the treatment described below to promote warmth. If there be only a slight breathing, or no breathing, or if the breathing fail, then to excite breathing, turn the patient well and instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn and smelling salts, or tickle the throat with a feather, etc., if they are at hand. Rub the chest and face warm, and dash cold water, or cold and hot water, alternately, on them. If there be no success, lose not a moment, but instantly try to imitate breathing by replacing the patient on the face, raising and supporting the chest well on a folded coat or other article of dress.

Turn the body very gently on the side, and a little beyond, and then briskly on the face, back again, repeating these measures cautiously, efficiently and perseveringly, about fifteen times in a minute, or once every four or five seconds, occasionally varying the same.

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By placing the patient on the chest the weight of the body forces the air out; when turned on the side this pressure is removed and the air enters the chest.

On each occasion that the body is placed upon the chest make uniform but efficient pressure, with brisk movement, on the back, below and between the shoulder blades or bones on each side, removing the pressure immediately before turning the body on the side.

During the whole of the operation let one person attend solely to the movement of the head and of the arm placed under it.

The first measure increases the respiration—the second commences inspiration.

The result is respiration or natural breathing, and if not too late, life.

Wile the above operations are being proceeded with, dry the hands and feet; as soon as dry clothing or blankets can be procured, strip the body and cover or gradually reclothe it, but taking care not to interfere with the efforts to restore breathing.

3. Should these efforts not prove successful in from two to five minutes, proceed to imitate breathing, as follows:

Place the patient on the back on a flat surface, inclined a little upward from the feet; raise and support the head and shoulders on a small, firm cushion or folded article of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips. an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied around them, or by raising the lower jaw the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

To imitate the movements of breathing, stand at the patient's head grasp the arms just above the elbows, draw the arms gently and steadily upward above the head, and keep them stretched upward for two seconds. By this means air is drawn into the lungs. Then turn down the patient's arms, and press them gently and firmly, for two seconds, against the side of the chest. By this means air is pressed out of the lungs.

Repeat these measures alternately, deliberately and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to induce circulation and warmth.

4. The treatment after natural breathing has been restored is to promote warmth and circulation; commence rubbing the limbs upward, with firm, grasping pressure and energy, using

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handkerchiefs, flannels, etc. By this means the blood is propelled along the veins toward the heart.

This friction must be continued under the blanket or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles or bladders of hot water, heated bricks, etc., to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet.

If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room.

On the restoration of life a teaspoonful of warm water should be given, and then, if the power of swallowing has returned, small quantities of wine, warm brandy and water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

The above treatment should be persevered in for some hours, as it is an erroneous opinion that persons are irrecoverable because life does not make its appearance, persons having been restored after persevering many hours.

The appearances which generally accompany death are, breathing and the heart's action cease entirely; the eyelids are generally half closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue approaches to the under edges of the lips, and these, as well as the nostrils, are covered with frothy mucus. Coldness and pallor of surface increase.

Caution is necessary to prevent crowding of persons around the body, especially if in an apartment.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet.

On no account place the body in a warm bath, unless under medical direction, and even then it should only be employed as a momentary excitant.

New Form of Antiseptic for Local Use.—The liquor carbonis detergens is recommended. It is an alcoholic solution of coal-tar, containing, we presume, the carbolic, phenic, and other acids, with the dark tarry matter, and differing from carbolic acid, as the liquor chinchonæ does from quinine. It readily mixes with water, forming a permanent emulsion, and in various strength is available as a mouth-wash, a gargle, an injection for fetid uterine discharges, cancer, retained placenta, etc., gonorrhœa in the female, foul ulcers, sloughing sores, and all malodies dependent in, or complicated by, parasitic beings, lice, fungi, etc. It is also used combined with soda.—*Ex.*

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THE MEDICAL REPORTER.

ST. LOUIS, AUGUST 1, 1867.

REVIEWS.

ELEMENTS OF HUMAN ANATOMY: GENERAL, DESCRIPTIVE AND PRACTICAL. By T. G. RICHARDSON, M. D., Professor of Anatomy in the Medical Department of the University of Louisiana. Second edition, carefully revised, and illustrated, by nearly three hundred engravings. Philadelphia: J. B. Lippincott & Co. 1867.

An examination of this work proves it to be as complete as most works on human anatomy. "The union of general, descriptive and practical anatomy in the same volume" is an advantage which we seldom meet with; and the English names substituted for the Latin, although these latter are appended, and though we are accustomed to them, we believe are better adapted to the capacity of the American student. The descriptions of the different parts are close and concise, and though probably no change has been made from older editions—for anatomy is now the same as at first described, except so far as relates to microscopy and chemistry—yet the impress of the author's mind gives character to the present work throughout. The illustrations are excellent. Altogether, it is admirably adapted to the wants of the student in the lecture and dissecting room, and we recommend it besides to the practitioner, in the review of his earlier studies in anatomy.

ON RAILWAY AND OTHER INJURIES OF THE NERVOUS SYSTEM. By JOHN E. ERICHSEN, Professor of Surgery and Clinical Surgery in University College, Surgeon to University Hospital.

"Je Raconte, Je ne Juge pas."—*Montaigne.*

Philadelphia: Henry C. Lea. 1867.

This very excellent work is composed of six lectures, delivered before a medical class, on injuries of the nervous system that commonly result from accidents on railways. The subject is one of some novelty to the profession, so far as the cause relates, though of that importance to direct the attention of the practitioner with exceeding scrutiny to its consideration. The lectures treat of the effects of severe blows on the spine; on concussion from slight injury and general shock; on twists and wrenches of the spine; the symptoms and pathology of

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concussion of the spine; diagnosis, prognosis, and treatment. Cases of great interest illustrate the remarks, and the whole subject is treated in a masterly manner, worthy of the heart and mind of the lecturer. It can not be too highly recommended to the profession.

Proceedings of Morgan County Medical Society.—The society met in Jacksonville, on Thursday, the 11th of July. Dr. Henry Jones, President; Dr. C. T. Wilbur, Secretary.

Dr. Bibb reported a case of gonorrhœal orchitis, treated by a deep incision, followed by immediate relief to the patient, and a more speedy convalescence than by any other method of treatment that he had ever adopted. He had been prompted to try this method from the successful results of similar operations by eminent medical men in Europe and in this country, who had published their plan of treatment in the late medical journals, and was much pleased with the result of the practice in the case referred to.

Dr. Prince remarked, though he had never tried the plan, yet it was recommended by many surgeons, and was uniformly well spoken of. He supposed the practice was based upon the hypothesis that the fluids discharged by the puncture had given rise to the pain by pressure, and the removal of the pressure gave immediate relief.

Dr. Kimber, of Waverly, mentioned a case where he had accidentally punctured this organ, but that immediate relief to the patient was the result, and a speedy convalescence. The patient had been troubled with orchitis and chronic hydrocele for several years, but after the accidental operation recovered completely, and had never been troubled since.

Dr. Edgar had found but little difficulty in treating this disease by the ordinary method.

Dr. Wilbur had been successful in several cases by using tartar emetic in nauseating doses, producing speedy convalescence.

Dr. Craig, of Arcadia, read a paper on scarlet fever, giving the history of a recent epidemic of this disease in his sphere of practice. He had found that nitrate of silver in solution, applied by spray through the atomizing tube; also a strong infusion of capsicum, applied in the same way, very beneficial local applications to the tonsils and pharynx. Used also tincture muriate of iron with glycerine as a local application to the throat.

Dr. Prince suggested that the way in which this epidemic had originated was additional evidence of the contagiousness of the disease, and should be remembered.

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Dr. Henry Jones, in relation to the imaginary prophylactic power of belladonna in this disease, remarked that in one family where he had faithfully tested its use, one little unruly boy had resisted every effort of his parents to make him take the belladonna, and he alone escaped the disease. He had found dilute muriatic acid locally applied the best remedy, and considered chlorine and chlorate of potash valuable remedies in connection with other means of treatment. He had observed that there was greater accelleration of the pulse in scarlet fever than in any other of the acute febrile diseases.

The St. Louis Medical College.—In a previous number of our journal appeared the annual circular of this institution. It has passed through a quarter of a century with the various changes of fortune incident to the life of every college, and though not yet arrived at the period to be styled the oldest institution of the West, can yet point with pride and satisfaction to the graduates who, respectable in numbers and intelligence, have passed from its halls.

With its wide sphere of usefulness enlarging from year to year, by its great and improved facilities for medical teaching, it is gradually reaching the point when it can have no superior in the West. Its professors of surgery, its anatomist, its obstetrician, its chemist, its teachers of the theory and clinics of medicine, its physiologist, are widely known from the reputation with which they have so long filled their respective chairs.

The St. Louis Medical School has probably unequaled advantages in its clinical teachings; with one large hospital entirely within its control, and the extensive City Hospital, every branch of surgery and medicine is illustrated by the numerous and important cases always found within its wards. Clinics are thus carried on throughout the year, and the student can always find, irrespective of the lecture term, opportunity to obtain information at the bedside. It is gratifying to see that these advantages are appreciated; even in the summer a considerable number of students are found daily at the clinics, pursuing their studies in the only way which can be profitable

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or successful. In the winter, of course, the largest classes are to be found.

The facilities for medical study in St. Louis are very great, and this fact is generally known. We believe that but few years will elapse before our city becomes the medical center of the great West. Medical schools will always exist here, and flourish—at least two may be counted on; if more, it is to be hoped that the only feeling of rivalry will be in advancing the great cause of medical education; and as the present idea of success in medical teaching obtains, clinics must be the all-important point around which all other methods concentrate.

The Health of St. Louis.—Since our last notice the health of the city has continued good, and it is a source of congratulation thus far that *no case of cholera* has occurred, and, confiding in the observations of those of our profession who have devoted much attention to the cause of epidemics, we shall not suffer again from the scourge this year. Our vital statistics show a comparatively low mortality; during the last week there was a falling off in the report by thirteen deaths—during the week ending July 19th there being 141 deaths; during the week ending July 26th there being 128 deaths. This is remarkable at this season of the year, when we experience the hottest weather. There has been some cholera morbus and ordinary summer complaint, but when seen early, easily remedied; and, in reference to the latter disease, under our own observation, much more readily yielding to treatment—of course among the poorer people, with whom these diseases prevail, there would not be this degree of tone of the system if there were any tendency to cholera. Whatever little experience they may have gained during the last year's epidemic, is no more appropriated for use than ever before. We might, indeed, remark the same of every grade of life; unless provided for, and thought for, by those having authority in such matters, but little attention is paid to sanitary regulations, strange as it may seem. While we believe there would have been cholera if the causes pre-

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vailed, though not to such extent, if we can judge by the history of former epidemics in St. Louis; we still further believe, not to such an extent, as a result of the sanitary regulations which have been so efficiently carried out by the wisdom and activity of our Board of Health. Thus far the Board has been "master of the situation," and we feel confident has been prepared for any emergency which might arise. The public little knows or thinks of the untiring exertions which each individual of the Board, and all connected with it, have made to re-organize the whole health department, and place it on a working footing. Look, for instance, at the present excellent condition of the City Hospital, Quarantine, and all the public health institutions; the workings of our sanitary committees and our street inspectors; the details of our city dispensary in every division; and when it is called to mind that within three months all the perfection of the organization has been effected, we certainly must accord a full measure of praise to the gentlemen who, at private sacrifice of profession and business, have been willing to assume these onerous duties. It is a thankless task, the way the world goes, but the medical part of the Board know that from its professional experience; of the non-medical gentlemen, one is already on a tour of observation, for the benefit of those who remain at home, and the other is well repaid in the results which have been obtained.

We have watched the action of the Board throughout, and have silently approved and indorsed every procedure; we now more pointedly express our gratification at the resolutions which were passed on the 22d of July, proximo, in reference to the sale of *unripe* fruit and vegetables. It is truly said therein, that it is prejudicial to public health, and that the object is to use every precaution for the prevention of summer complaints, particularly among the heedless and young.

Every physician knows the condition in which our markets are at the beginning of the warm weather; and every individual attack of cholera morbus or summer complaint may be traced to imprudence in eating or drinking. Of course the lat-

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ter can not be regulated; people will drink, no matter what, but in eating it is more within control. We do not oppose the use of vegetables; man must have a mixed diet, and particularly in summer is this necessary; but when we find on our market stalls hard green apples, unripe berries and vegetables, or these thrust upon the market as early as possible, to make it attractive, or gain a ready sale; or, worse than all, these articles preserved from day to day, till actually spoiled, in order to dispose of them; surely, here is the duty of the Board to place inspectors at every corner, if need be, and prevent the public from self-injury. The Board is the physician of the city, as one of its members is a physician to any private family, and must prevent disease as well as cure it.

It may be a temporary injury to the individual who has unwholesome food for sale, but this will not happen next year—as is the demand, so is the supply; or it may be oppressive upon the poor, who have to pay higher for the ripe fruit and vegetables; thus far we have not seen it; or it may be that all have to exercise self-denial for two months—but the farmer tells us he has raised more than he knows what to do with this fall and winter. The market stalls look empty, but we are not starved as yet; there plenty of vegetables and fruit, such as are are fit to be eaten, and more coming in; and it will be found at the end of the season who is right, the physician who tried to prevent disease, or the people who grumbled because they could not have their own way, and make themselves sick, and pay, or not pay, as the case might be, their doctors' bills.

We endorse in full the action of the Board of Health in prohibiting the sale of *unripe* and *stale* vegetables. We hope that the Sanitary Police will do rigidly their duty; and let all join in aiding the Board to make the health of the people the supreme law.

We call attention to the article of Prof. J. H. Salisbury, in present number of the REPORTER. Few have done more to develop medical science by aid of the microscope than Prof. Salisbury, and we trust his communication will receive a careful perusal. The remainder of the article will appear in our next number.

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J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

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INVESTIGATIONS, CHEMICAL AND MICROSCOPICAL, RESULTING IN WHAT APPEARS TO BE THE DISCOVERY OF A NEW FUNCTION OF THE SPLEEN AND LACTEAL AND LYMPHATIC GLANDS.—*To-wit: The formation of Cholesterine, and the partial transformation of the Cholesterine of the Bile and Food into Seroline; with some experiments relating to the action of the Salivary Secretions upon Farinaceous Saccharine and Albuminous Products; some facts and inferences relating to the Lymphatics and the products of Parent Cells—The detection of Cholesterine in the several parts of the Eye and of Seroline in, and as an Excretion of, the Prostate Gland—Also discoveries, briefly referred to, connected with the important primary functions of the Spleen, and the Lacteal and Lymphatic Glands, Liver and Kidneys; with remarks on the office of the Epithelial Cells covering the Intestinal Villi.*

By J. H. SALISBURY, M. D., Professor of Histology, Physiology and Cell Pathology in Charity Hospital Medical College, Cleveland, Ohio.

[Communicated for the St. Louis Medical Reporter.]

(Continued from Page 336—Conclusion.)

The biliary secretions originate from the interlobular cells and the biliary glandules, which are situated in the interlobular spaces and terminate the biliary tubuli, while the lobular parent cells, making up the great mass of the liver, are connected with the capillary vessels, and have nothing to do in the formation of bile, their special function being the organizing of animal glucose, and, perhaps, other products yet unknown, which enter the blood vessels. The capillaries of the portal vein and hepatic artery enter the lobule at one end, and divide, subdivide and anastomose, and finally converge and form a branch of the hepatic vein rising from the other.

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Of all glandular organs in the human body, the spleen seems to be one of those that is the most actively engaged in the *formation of fibrin*, by a similar process to that which occurs in the liver; though its *fibrin cells* are of a different type, resembling those of the *lacteal and lymphatic system;* while those of the liver are *allied to those formed in the kidneys* and *supra-renal capsules.* It has also been further determined, as will appear farther on, that *cholesterine and seroline* are *developed largely in the spleen,* in *the process of organizing fibrin cells. Owing to the independent vitality of the parent cells—they living long after the animal is dead, and continue to some extent their organizing functions, when placed in matters that afford them appropriate nourishment—we have been able to watch, for days together, their organizing process, and to trace the resultant products formed through all their metamorphosis.*

The most important among these are filamentous fibrin, blood discs and nerve products; the former is formed from the outside of the fibrin cells, and the blood discs are formed from the large central nuclei.

The functions of the spleen also appear to be performed by the *lacteal* and *lymphatic* glands. This will explain why it is that dogs have lived after the removal of the spleen. The interesting fact has been noticed that, in all such cases, the lymphatic glands (after the removal of the spleen) became much enlarged, and the appetite invariably ravenous.

The elimination of urine in the kidneys appears to be a process secondary (like that of the bile in the liver) to an important primary function in these organs, to-wit: the organizing of fatty, and perhaps bony, products.

CUTANEOUS, INTESTINAL AND PULMONIC EXCRETION AND EXHALATION.

The cutaneous excretions and exhalations are made up of water, urea, cholesterine and seroline, and sebaceous matter; lactic and acetic acids, carbonic acid (in disease stelline, stellurine, cystine, oxalate of lime, creatine, creatinin, phosphates,

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&c.), and the saline constituents existing in the blood. Of these excretions 990 parts in every 1000 consist of water.

The perspiration often possesses a sour odor and acid reaction from the presence of acetic and lactic acids. These are supposed to be derived from the sugar of the blood, which, in healthy conditions, is transformed into animal glucose by the liver, in which condition it is carried into the circulation and metamorphosed in the pulmonic and systemic capillaries by, perhaps, a fermentative process, in connection with epithelial cells, into acetic and lactic acids. The mucous membrane of the alimentary canal, besides containing a large number of gastric and duodenal glandulæ for the elimination of secretions to aid in the digestive process, and follicles for furnishing protective mucus, are provided with a large number of glandulæ, known as those of *Peyer*, in honor of the discoverer.

These latter are confined mostly to the large and small intestines. They consist of closed vesicles lying beneath the mucous membrane, forming small, circular, raised spots. They contain cells in various stages of development.

There appear to be lymphatic glands. From the pulmonic surfaces are exhaled a large amount of watery vapor and carbonic acid, with considerable nitrogen. The average daily amount of watery exhalation from the cutaneous and pulmonic surfaces of a man is about 3 1-2 pounds. The pulmonic is to the cutaneous exhalation as 7 is to 11. (Creatine, stelline, stellurine, cystine and the triple phosphates are also most likely effete products to be excreted, as undoubtedly they are all produced by interstitial death and decay, and probably have a cutaneous as well as renal exit. Creatine occurs abundantly in all decaying flesh, especially so in that of fowls, and in the decaying brains of animals. Form. $C_8\ N_4\ H_{11}\ O_6$. Cystine is also quite uniformly present in decaying flesh and nerve tissue. It is also frequently present in the urine of fevers and in that of other diseases where there is a rapid waste of the tissues. It crystallizes generally in hexagonal prisms or plates. The

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primary form of the crystals is the rhombic and rhomboidal-prisms. Form. $C_6\ N\ H_6\ O_4\ S_2$. The triple phosphates also occur abundantly in all decaying tissues, in which often these crystals can be detected by the microscope.)

CHOLESTERINE IN THE EYE.

January 12th, 1863, examined crystalline lens, vitreous and aqueous humors of the eye of a fat Durham cow, about 6 years old, that had been slaughtered for beef.

EXPERIMENT 4.—Took one crystalline lens (weight 69.13 grains), crushed and exposed it to the heat of a water bath in a large watch-glass capsule, occasionally stirring and working it over, till it was entirely deprived of moisture. The stirring while drying reduced it to a granular powder. This was finely pulverized in an agate mortar and digested with ether, frequently agitating for 12 hours. The ethereal solution was then filtered, and the filtrate proceeded with in the usual way for obtaining cholesterine and seroline. The final solution, on being evaporated between glass slides, afforded a large crop of beautiful cholesterine plates, resembling closely those of the bile of the hog, represented in the April number of the American Journal of Medical Science for 1863. The quantitative result was not obtained; but the abundant crop of crystals indicated this body largely present.

EXPERIMENT 5.—200 grains of the vitreous humor were carefully dried on a water bath, as in the previous experiment, and proceeded with as in the usual way for obtaining cholesterine. On allowing the final solution to evaporate spontaneously between glass slides, a moderate crop of well-defined crystals of cholesterine was obtained. The cholesterine was not quantitatively determined; but, judging from the amount of matter employed and the crop of crystals obtained, I should estimate a much less per centage of this body in the vitreous humor than in the crystalline lens.

EXPERIMENT 6.—200 grains of the aqueous humor, with which was mixed a little of the coloring matter of the pigmen-

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tum nigrum, were carefully evaporated over a water bath and subjected to the further steps in the process for determining cholesterine. Well-defined plates of this body were obtained. The quantity present appeared larger than that in the vitreous humor, but less than that in the crystalline lens.

PROSTATE GLAND.

EXPERIMENT 7.—In a large, fat (butchered) hog, about 2 years old, and weighing 500 pounds (castrated four months previous to the time when butchered), was found a prostate gland, about 4 inches from the mouth of the bladder, which weighed 1060 grains. In color and appearance it resembled a mesenteric gland. It contained a white, milky fluid in considerable quantity. This fluid was filled with cells about the size of the mucous cells of the salivary secretions, but were more highly transparent and refractive. They had a tendency to run into filaments, as many of these had caudal projections. They contained many nuclei. The fluid from this gland, with 200 grains of the gland itself, were treated together for cholesterine and seroline. Obtained a fine crop of seroline crystals. No cholesterine found.

LACTEAL AND LYMPHATIC GLANDS OF THE HOG.

EXPERIMENT 8.—Spleen from a fat, healthy hog, fatted on corn and killed in January; age, about 18 months; weight, 240 pounds; length of spleen, 15 inches; width at wide end, 3 inches; at narrow end, 1 3-4 inches; mean width, 2 3-8 inches; thickness at wide end, 1 inch; at narrow end, 1-3 inch; weight, 2028 grains; healthy; color, livid like the liver, with a slightly more milky hue. Hog every way healthy. The cells secreted by the spleen resembled the colorless capsules of the blood.

A slice was cut lengthways through the centre and whole length of the gland. It weighed 284 grains. This was cut in small pieces and subjected to the usual process for determining the presence of cholesterine and seroline. Obtained an abundant crop of most beautiful crystals of seroline and cholesterine.

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The crystals of each were about equally divided. Those of seroline were very long and often radiating and dividing at extremities.

The cholesterine crystals were usually long and narrow, but beautifully defined and rhomboidal.

EXPERIMENT 9.—*Pancreas.* This gland was taken from the same hog as the spleen. Weight, 2107 grains; color, of a pale, pinkish white, like that of the mesenteric glands. In the hog it extends from the stomach along the duodenum, about 12 inches. The fluid secreted by this gland is filled with minute globulæ, and resemble organized hydro-carbonaceous products. They are like what has been been called the *molecular* base of the Chyle.

Made a thin slice through the centre of the gland lengthways, cut it in small pieces and subjected 240 grains to the process for obtaining cholesterine and seroline. Obtained an abundant crop of crystals of cholesterine and seroline. The cholesterine crystals were long, narrow, and often radiating, and were about equal in quantity with those of seroline.

EXPERIMENT 10.—*Small Mesenteric Glands,* lying close to each other between the stomach and forward end of the pancreas, and in the small curvature of the stomach. They varied from 1 to 2 inches in length, and from 1-2 to 1 inch in width, and 1-4 to 1-2 inch thick, and were five or six in number. Their surfaces were of a livid color, like congested lung. The livid structure extended about 1-8 inch deep. The internal portion of the glands was of a greyish, white color. In cutting through the glands, a milky, semi-fluid secretion exuded. This, under the microscope, was resolved into cells, resembling the colorless corpuscles of the blood, which are formed in the spleen and mesenteric glands of the small intestines. 200 grains of these glands, made up of thin slices through their centres, were subjected to the process for obtaining cholesterine and seroline. Obtained an abundant crop of crystals. The cholesterine plates were here seen passing into the acicular crystals of seroline.

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They occurred in all stages of transformation, from the perfect crystal of cholesterine to those splitting at their extremities, to those splitting at one end and having acicular crystals of seroline radiating from the other. There were but few perfect crystals of cholesterine. The most of them were in the transforming stages.

EXPERIMENT 11.—*Mesenteric Glands,* taken from the mesentery, along the line of the jejunum and ileum, from the same hog as the pancreas and spleen. These glands were of a grey, pinkish, white color. They vary from the size of a wheat kernel to an inch in length. They were generally larger and much more numerous than those of the mesenteric glands of the large intestines. The cells secreted in them were analogous to those of the colorless corpuscles of the blood. Subjected 200 grains of the glands (obtained from the slices through the centres of most of them) to the process for obtaining cholesterine and seroline. Obtained an abundant crop of crystals of cholesterine and seroline. There appeared to be a greater proportion of the narrow plates of cholesterine in these glands than in those of the mesentery of the large intestines. The cholesterine seemed to be in an advanced stage of its metamorphosis into seroline.

EXPERIMENT 12.—*Mesenteric Glands,* taken from the mesentery of the large intestines. These glands were much smaller and less numerous than those in the mesentery of the small intestines, but similar in color and texture. They were taken from the hog before described, and from two others of about the same weight and condition. Subjected 200 grains to the process for determining the presence of cholesterine and seroline. Obtained an abundant crop of crystals. By far the largest proportion of the crystals were those of seroline. The cholesterine crystals were few, long and narrow, and often radiating like those of seroline. They appeared to be far advanced in their metamorphosis.

EXPERIMENT 13.—*Thymus Glands.* These were taken from

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the hogs before described. They resembled, in color and texture, the mesenteric glands. The cells secreted in these glands, like those of the mesenteric glands of the small intestines, bore a strong resemblance to the colorless corpuscles of the blood. They lay in the track of the thoracic duct of the left side, back of the mediastinum, and near the bronchial bifurcation. The glands ranged in weight from 90 to 100 grains each. 200 grains, made up of sections through the glands, were subjected to the process for obtaining cholesterine and seroline. Obtained a large crop of crystals of cholesterine and seroline. The general character of the crystals was the same as those found in the mesenteric glands of the small intestines.

EXPERIMENT 14.—*Glands lying under the Aortic Arch*, back and toward the right side of the trachea, above the bronchial bifurcation. These glands were huddled together to the number of about half a dozen. Each was about the size, and had very much the appearance of a thymus gland. The cells secreted in them resembled those of the thymus gland and those of the mesenteric of the small intestines. They lay in the track of the thoracic duct. 200 grains, made up of sections through the glands, were subjected to the process for obtaining cholesterine and seroline. Obtained an abundant crop of crystals, among which were crystals of cholesterine in all stages of transformation into seroline. These bodies were largely present. These glands were taken from the same hogs as those before described.

EXPERIMENT 15.—*Thyroid Glands.* These glands were taken from the three hogs previously described. In color and texture they were between the mesenteric glands and muscle. They were largely charged with fat. 150 grains of the glands were subjected to the process for obtaining cholesterine and seroline. Obtained well-defined crystals of seroline, but no cholesterine.

EXPERIMENT 16.—*Peyer's Glands*, from the hogs before described. Intestines in perfect health. The glandulæ were

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taken from about 4 inches above the cul-de-sac to 2 feet below it. They were carefully dissected out after laying open the intestines and carefully washing them with warm water until free from all adhering mucous and fœcal matter. They were subjected to the process for determining the presence of cholesterine and seroline. Obtained a fine crop of crystals of these bodies.

EXPERIMENT 17.—*The Small Intestines*, for 2 feet above the cul-de-sac, and the *large intestines* for 2 feet below, were laid open, their contents removed, and the mucous lining rinsed clean in cold water. The slimy matter and mucous membrane were then scraped off, and then subjected to the process for obtaining cholesterine and seroline. The result was a fine crop of crystals of seroline, with which were a few narrow crystals of cholesterine.

RESUME.

The following appear to be the main facts elicited from the foregoing experiments, and from some brief concluding remarks relating to other experiments and investigations, which are too extended to be introduced in this paper:

1. The salivary secretions excite the panary fermentation in wheat dough.

2. The salivary secretions excite, also, in moistened wheat dough that has been raised by them, the development of torula (yeast) cells, quite as abundantly and readily as brewers' yeast, and, consequently, must excite in farinaceous matter alcoholic fermentation.

3. The salivary secretions excite the acetous and putrefactive fermentations in wheat dough.

4. The salivary secretions do not excite any perceptible alcoholic fermentation in solutions of sugar, but slowly develop acetous and putrefactive changes.

5. The salivary secretions hasten putrefactive fermentation in fresh meats.

6. Torula cells have been noticed in the blood of the living

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body, indicating the presence of sugar, undergoing fermentative changes.

7. Algoid and fungoid spores occur in the blood of fevers, in that of erysipelatous inflammations, and in that of diabetes.

8. The cell products of parent cells have a tendency to take on filamentous development, and those filaments make up much of the basement structure of the animal body.

9. It appears that one important office of the lymphatics is, to more perfectly assimilate, transform and organize albuminous matters into fibrini, and that they are not exciting organs, but strictly organs of assimilation.

10. Cholesterine occurs in the vitreous and aqueous humors and crystalline lens of the eye.

11. Seroline occurs as a secretion in, and an excretion of, the prostate gland.

12. Certain forms of the lithates of ammonia and soda of Golding Bird are deposited in developing cells that emanate from the epithelial tissue of the urinary surfaces.

13. Cholesterine and seroline are formed quite largely by the spleen. This organ appears to be one of the principal sources of the cholesterine and seroline that are formed in the animal body.

14. The pancreas, in the hog, appears to possess the power of transforming cholesterine into seroline.

15. The thyroid gland of the hog contains seroline.

16. Peyer's glandulæ and the mucous follicles of the large intestines, and the lower portion of the small intestines, eliminate seroline, mixed with cholesterine in the last stages of transformation into seroline.

17. The cholesterine, secreted from the blood by the liver and poured into the alimentary canal as a constituent of the bile, appears not to be an excretion proper of that organ, as is evident from the fact that it is mingled with the chyme (as a constituent of the bile) and aids in transforming this substance into chyle, with which it is taken up by the lacteal system, and,

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during the elaboration of the nutrient materials in their passage through the lacteal glands, becomes partially transformed into seroline. This renders it probable that cholesterine, with other products of the bile, perform some useful function in the assimilation and *organization of nutrient materials.*

18. Cholesterine is not eliminated from the body as such to any great extent, but is transformed, usually first into seroline, before *it becomes an effete product.*

19. Cholesterine is taken up with albuminous matter from the blood in its capillary circulation by the lymphatics, and, during its passage through the lymphatic glands, appears to become partially transformed into seroline. (See Experiments 13 and 14.)

20. The cholesterine of the food of the bile appears to be partially transformed into seroline by the lacteal glands. These glands also appear to have the power, to some extent, of forming cholesterine in the process of organizing fibrin cells from the albuminous materials of the chyle.

21. Epithelial cells are extra-vascular, and appear to be organisms analogous to cells of the zoosporoid type, possessing a vitality independent of the animal to which they are attached, and placed between the dead world and the living animal tissues; their function being to feed upon crude matters, and so change their character in their transit through them as to fit them to act as food for the more highly animalized parent cells inside the basement membrane.

22. That the epithelial cells covering the intestinal villi appear to be the primary agents in the taking up and organization of the chylous materials of the food; that they fit a portion of the materials transmitted through them to be appropriated by the capillary vessels; while the balance passes on to be taken up by the lacteals, and to be organized by the parent cells of the lacteal glands.

23. That much of what is called endosmotic and exosmotic action appears to arise primarily from the vitality of living cells; and, as such is not a property of dead matter, but one

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of living cells, by which living cell organisms are fed and nourished. It is simply a process of cell-feeding.

24. That the important and primary function of the lacteal and lymphatic glands is to organize fibrin cells; from which, by metamorphic changes, a portion of filamentous fibrin and blood discs of the blood are formed; also, a portion of the nerve products, including cholesterine and seroline.

25. That the important function of the spleen is to organize fibrin, blood discs, and cholesterine and seroline, and some other nerve products.

26. That it is the primary function of the lobules of the liver to organize fibrin cells and animal glucose; and that of the interlobular cells and biliary glandules to form the biliary secretions.

27. The biliary glandules terminate the biliary tubuli in the interlobular spaces.

28. A primary function of the kidneys and supra-renal capsules is to form fatty substance, and perhaps bony matters, and a peculiar class of fibrin cells, resembling somewhat those of the liver; and that the secretion of urine appears to be a resultant process of the organization of these products.

29. *That the primary form of fibrin, when first organized from albuminous matters by the parent cells of the glands, is a cell* enclosing (in mammalia) a large central nucleus, surrounded by many minute cells. That, subsequently, this cell, save its cell contents, is "spun" or metamorphosed into a filament, which filament is a secondary form of fibrin, the form of blood fibrin, and in which condition it is fitted to permeate the thin-walled capillaries, and be appropriated by the living fibrinous tissues.

CONCLUDING REMARKS.

Cholesterine and seroline are formed quite largely in the spleen during the organization of cells (fibrin cells and blood discs) in this organ. The cell products of the spleen have been treated of fully in a paper on this subject, published in the American Journal of Medical Sciences, April, 1866. The ulti-

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mate structure and functions of this gland are highly interesting, and explain many obscure and long sought for physiological processes. There is strong evidence for believing that this gland, instead of the brain, as has been supposed, is one of the principal sources of the cholesterine that originates in the animal body. Unless the brain be admitted to be in part a gland, we ought to have suspected that it necessarily could have itself no power to organize the ultimate products of which it is composed. It is the peculiar function of glandular structures in their varied arrangement to organize the ultimate basement products of which the tissues of the body are built up and sustained. The tissues, save the fibrinous, cartilaginous and bony, have simply the power of appropriating materials organized for them by glandular structures. There is, however, some probability, from the presence in the nervous system of nucleated cells, which appear analogous to parent gland cells, that it may perform glandular functions, but to what extent is not known.

There is also evidence for believing that the lacteal and lymphatic glands form cholesterine and seroline to some considerable extent during the performance of their function of organizing fibrin cells, &c., from the albuminous materials of the chyle. There is also evidence of these glands performing the office of transforming, in some degree, the cholesterine of the chyle (nutrient products of the food mixed with bile) into seroline.

Further, there is evidence that the bile is a product of the interlobular, epithelial cells, from which it is secreted by *biliary glandulæ*, which are found to terminate the biliary tubuli in the interlobular spaces. It appears, although an excretion of a certain class of hepatic cells, not to be an excretion proper of the liver, but a secretion, secreted by the biliary glandulæ for specific purposes in digestion and assimilation. The evidences of this will be fully set forth in another paper on the ultimate structure and functions of the liver.

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THE GEYSER SPRINGS OF CALIFORNIA.

California is a land of wonders, and not the least is what is called the Geysers—a name not strikingly original, but which has all the more meaning from being borrowed from another spring, in Iceland, of immense volume, rising to a great height, not less than a hundred feet, and sufficiently hot to be employed in the economies of boiling food—meat and vegetables—for the table of the neighboring peasantry.

"Descending from the hotel," says a writer who was exploring the mountains for the wonders of nature, "about seventy-five feet, we first meet the 'spring of iron, sulphur and soda,' having a temperature of 73° Fahr., and pleasant to the taste. We crossed the Pluton, ninety-seven feet below the hotel—we like to be particular about the odd feet, always stick to the fractions; if they be not vulgar, you will carry conviction—running between and among huge metamorphic boulders, incrusted with sulphurous deposits. The temperature of the stream was 79°.5. The first spring going up the Geyser gulch is the 'tepid alum and iron incrusted,' having a temperature of 97°.5, and with a very heavy irridescent incrustation of iron, which forms in a single night, as we have tried by experiment. Of all the springs this is most powerful, and you will gladly take a second drink of its tonic waters. Twenty feet from this we pass the 'Medicated Geyser Bath,' having a temperature of 88°.8, and containing ammonia, epsom salts, magnesia, sulphur, iron, and goodness knows what else. Going upward we come to a cool, shady retreat, called Proserpine's Grotto, from whose sides we collected crystals of epsom salts, two inches in length, and fine as floss silk.

"From this point epsom salts begin to predominate. Higher up the 'spring of boiling alum and sulphur' has a temperature of 156°, but where it issues, is at the boiling point; so, also, is the 'black sulphur,' quite near it. The 'epsom salt spring,' combined with a little iron, has a temperature of 146°, and within six feet of it is a 'spring of iron, sulphur and salts,' at the boiling point. Soon we come upon the 'boiling black sulphur' spring, roaring and tearing continually; the noise is so peculiarly like that of a half-submerged propeller that it has received that name.

"As we wander up over rock, heated ground, and thick deposits of sulphur, salts, ammonia, tartaric acid, magnesia, etc., we try our thermometer in the Geyser stream, a combination of every kind of medicated water with the cold, clear spring of water at its source, and find that it runs up to 122°. In many places, if you step out of the regular trail, the crust of the earth sinks under you; hissing steam and heated air assail you,

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and the thermometer thrust into the crevices runs over 180° as you draw back from the scalding vapors. All this time the roar of the Steamboat Geyser, and its great volumes of steam, warn you that you are approaching the focus of action and treading on the face of one of nature's vast laboratories, whilst a horrid boiling and seething as the black cavernous opening on the left of the stream tells of an another operation unceasingly going on. We have reached the famous Witches' Cauldron, over seven feet in diameter, partly eaten out of the side of the crumbling cliff, of unknown depth and great activity. The contents are thrown up about two or three feet high in a state of great ebullition, and made ten times more horrid by being only semi-liquid, blacker than ink, and contrasted with the volumes of vapor arising from it. The point of greater activity is on the further side, and the temperature 195°.5.

"The water itself is insipid, and the deposit, when dried, is a very fine, light, lead-colored sandy earth. It is about eighty-three feet higher than the hotel. Opposite this spring is a boiling alum spring, very strongly impregnated. The temperature of the exposed water is 176°. Within twelve feet of this is an intermittent scalding spring, from whose irregular black opening issue steams and jets of boiling water; we have seen them ejected over fifteen feet—so keep your eye open when you see them coming! The peculiar noise and action of this spring have led it to be called the Devil's Grist Mill. Truly we believe we are on the borders of the infernal regions, and all our thoughts conjure up the classic mythology concerning the shadowy world. But the crowning glory of all is the Steamboat Geyser, having the well known and peculiar way of a high-pressure seven boiler boat blowing off steam which issues in a column about two feet in diameter, and so heated as to be invisible until it is six feet from the mouth. This famous sight can only be approached when a strong wind is blowing the steam away from you—to be enveloped in it would be to forbid you in less time than you read this sentence.

"Upon the first day of our arrival we could not approach it, but subsequently stood within six feet of its horrid, burning mouth. Just above this the gulch divides; up the left, or western one, are many hot springs, but the 'Scalding Steam Iron Bath' is the most important; the water from it we found to have a temperature of 183°. On the spur between this and the right, or eastern gulch, and 150 feet above all apparent action, we found a smooth, tenacious, plastic, beautiful blue clay, having a temperature of 167°. From this point you stand and overlook the ceaseless action, the war, steam, groan and bubbling of a hundred boiling medicated springs, whilst the steam ascends a hundred feet above them all. It is up the eastern

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gulch that you find the source of the Geyser stream, that unites and carries down with it all the waters of this natural laboratory. At the head we found pure, limpid water, having a temperature of 71° (the sun shining upon it), whilst alongside of it, and commingling its waters, is an iron spring, having a temperature of 71°.5.

"Following the usually traveled path, we pass over the 'Mountain of Fire,' with its hundred orifices beautiful with their steam jets at sunrise, thence through the 'Alkali Lake,' having a very crater-like form, and over which your inexperience prompts you to tread carefully. Stop a moment and stamp upon the firmest looking portion, and a deep subterranean growl tells of the hollowness beneath; thence we pass to the inappropriately and inelegantly designated 'Washtaly' cauldrons of black sulphurous boiling waters, some moving and sputtering with violent ebullition, some boiling noiselessly, some with constant and powerful escape of steam, and some with the deep rumbling of cavernous ebullition. One white sulphur spring we found quite clear, and up to the boiling point. At this place we found a cream-colored, warm, plastic clay, but filled with fine grit.

"On every foot of ground we had trodden, the crystallized products of this unceasing chemical action abounded—alum, magnesia, tartaric acid, epsom salts, ammonia, nitre, iron, sulphur, etc. We tasted of everything, and our tongue, lips and throat paid the penalty of the rashness. At thousands of orifices you find hot scalding steam escaping and forming beautiful deposits of arrowy sulphur crystals, some nearly two inches in length. Make a hole in the burning ground, and subsequent visits show you that this process has commenced around it. Forget for a moment your burned boots, tired limbs and stained clothes, and follow the train of thoughts that this great and changing action suggests. How great and how small is this peripatetic, microcosm man?"—*Druggists' Circular.*

Birth and Death-Rate of the World.—Statisticians have calculated that if the population of the world amounts to between 1,200,000,000 and 1,300,000,000 persons, the number of deaths in a year would be about 32,000,000. Assuming correctness of this calculation, the deaths each day would be nearly 88,000, 3,600 per hour, 60 per minute, and thus every second would carry into eternity one human life from one part of the world or another. But reproduction asserts its superior power; for, on calculating the probable annual births on the globe, the result shows that, whereas 60 persons die per minute, 70 children are born, and thus the increase of the population is kept up.—*Lancet.*

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LECTURE ON CERTAIN MORBID AFFECTIONS OF THE FINGERS AND TOES.

By Alfred C. Post, M. D., Professor of Surgery in the Medical Department of the University of New York.

There are certain diseases of the fingers and toes, to which I will now direct your attention. The first of these is in common language called a felon or whitlow. It is technically called paronychia, the term being derived from the Greek words *παρά*, beyond, and *ονυξ*, a nail. It is an acute inflammatory affection, involving primarily the synovial membrane which lines the sheath of the flexor tendon, and extending secondarily to the periosteum of the adjacent phalanx, and to the integument covering it. It may be the result of a puncture or contusion, or of exposure of the part to excessive heat or cold. It sometimes occurs without any obvious exciting cause. The first symptom is a circumscribed dull pain, referred to the palmar surface of one of the phalanges, and increased by pressure upon the affected part. This pain gradually increases in severity, until it amounts to almost intolerable agony. It assumes a distinctly pulsatory or throbbing character, and is greatly aggravated by a depending position. The severity of the pain is such as to incapacitate the patient for bodily or mental exertion during the day, and in a great measure to prevent him from sleeping at night. When the disease is left to itself, it continues to torment the patient by day and by night, during a period varying from one to two weeks, until the sloughing of the fibrous investments, and the ulceration of the integument, relieve the tension of the inflamed parts, and give issue to a collection of purulent matter resulting from the inflammatory action. At the commencement of a paronychia there is very little swelling, and as the disease advances, the swelling takes place very gradually, in consequence of the density of the tissues which are involved. The swelling is at first confined to the anterior surface of the affected phalanx, and then slowly spreads along the adjacent phalanges, both in a proximal and distal direction. It also secondarily involves the dorsal surface of the affected member, and at an advanced period the dorsal swelling sometimes exceeds that which exists on the palmar surface. Under these circumstances, it is a matter of great practical importance to avoid the error which I have known to have been commited—viz., that of regarding the dorsal inflammation as the main disease, and directing the principal treatment to its relief. Under such a mistaken view of the disease, and the consequent erroneous treatment, the sufferings of the patient are unnecessarily protracted, and the liability to disorganization and deformity is greatly increased. The swollen parts ex-

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hibit a blush of redness more or less deep, and the temperature of the surface is elevated considerably above the normal standard.

When a spontaneous opening has occurred, the intensity of the patient's sufferings is relieved, and he is able to sleep. But a considerable time elapses before the pain and swelling subside, and the tenderness on pressure ceases to annoy the patient. Before the part returns to a painless condition, it often happens that the flexor tendons have sloughed, and the patient has thus permanently lost the power of flexing the finger. The inflammation often extends to the periosteum and to the bone, giving rise to caries or necrosis, followed by permanent deformity of the affected member. In some cases, fortunately rare, the inflammation becomes diffuse, extending along the palm of the hand, and up the forearm and arm, sometimes rendering necessary the amputation of the limb. In one case, occurring in the practice of a professional friend, the patient's life was barely saved by amputation at the shoulder joint.

Notwithstanding the severity of this disease, and the injurious consequences to which it leads, when left to itself, I have always found it amenable to treatment. At a very early period, before any considerable swelling has occurred, the disease may sometimes be arrested by the application of poultices or fomentations, at as high a temperature as the patient is able to endure. But the remedy on which the principal reliance is to be placed, is a free and deep incision extending into the sheath of the tendon. A superficial incision will afford little or no relief; and a puncture, extending into the synovial sheath, and giving exit to pus, will fail to afford the complete and immediate relief which is the result of a free incision. The object of the incision is not merely to give exit to pus, but to relieve the tension of the fibrous membranes which strangulate the inflamed parts, or which have themselves become involved in inflammatory action. The manner of making the incision is a matter of some practical importance. If an attempt be made to open a paronychia in the same manner in which an abscess is usually opened—viz., by inserting the point of a lancet or bistoury, and then cutting out toward the free surface of the skin, the opening will be very apt to be insufficient. The best method is to lay the back of the hand on a towel resting upon a table, and having the finger held in an extended position, to cut boldly with a sharp scalpel from the surface into the synovial sheath, to the extent of half or three-quarters of an inch. If the patient is not under the influence of an anæsthetic, the incision occasions a severe but momentary pain, followed by a smarting or burning sensation, of variable duration, but not usually of great severity. The throbbing and aching pain of

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the disease is almost instantaneously relieved by the incision, when it is properly made. There may be some question as to the time when a paronychia should be laid open. Most patients prefer waiting until they have passed several sleepless nights before they make up their minds to undergo the operation. My own opinion is in favor of making the incision at as early a period as the disease can be accurately diagnosticated. I do not wait for the occurrence of suppuration. If this can be anticipated, it will save the patient much suffering, and the wound will heal more promptly than if the incision had been made at a later period. When the incision has been made at an early period, before much swelling has taken place, the only dressing required will be a compress of lint wet with cold water, and wrapped around the finger. But when the incision has been made at a more advanced period of the disease, when there is great swelling, with copious suppuration, emollient poultices may be applied with advantage. But they should not be continued more than three or four days after the operation, as their protracted use produces too much relaxation, and retards the healing of the sore. When the poultices are laid aside, the sore may be dressed with lint spread with a moderately stimulating ointment, as ung, resin, etc. When necrosis or caries of the bone has taken place, the diseased or dead bone may be removed, or the finger may be amputated.

It is rare to meet with paronychia of the toes. The thumb and fingers are the usual seat of the disease.

The disease known as onychia is liable to occur in the toes as well as the fingers. It affects the great toe more frequently than the smaller ones, and I think that I have observed it more frequently in the thumbs than in the fingers. The disease is an inflammation of the matrix of the nail, and of the adjacent portions of the skin. It is often occasioned by contusion of the distal extremities of the fingers or toes. Sometimes it occurs from constitutional causes. A very severe form of the disease occurs in connection with constitutional syphilis. The disease known in common language as a "run round" is a mild form of onychia. The more severe form of onychia is a very obstinate and painful disease, often continuing for years, and showing no tendency to amelioration except under the influence of appropriate treatment. The extremity of the affected finger or toe becomes greatly swollen, presenting a livid red color, with ulceration beneath the nail, and giving issue to an offensive sanious discharge. The nail itself becomes partially detached, presenting a broken and irregular outline, and having a dark color. In its abnormal condition, it acts as a foreign body, and its presence maintains a persistent irritation.

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The first step in the treatment of this troublesome and obstinate disease is the evulsion of the diseased nail. The nail should first be divided longitudinally with a pair of strong scissors, and then each half should be separately seized and extracted with a pair of chiropodist's forceps. After the bleeding has ceased, the whole ulcerated surface should be lightly touched with nitric acid, after which cold water dressings should be applied. At intervals of forty-eight hours the surface may be brushed over with nitrate of silver, or with the compound solution of bromine. The cold water dressings may be continued with advantage until the parts are restored to a sound condition, or a lotion may be employed of liquor sodæ chlorinat. diluted with eight parts of water. When a toe is the seat of the disease, the lower extremity should be kept in a horizontal position. Under the treatment which I have recommended, the disease has generally been cured within a few weeks. When onychia has occurred from constitutional causes, appropriate internal remedies should be administered.

Onyxis, or inverted toe-nail, is a disease which affects almost exclusively the great toe. It presents the character of an inflamed ulcer, involving the dorsal integument of the toe, on one side of the nail, the angle formed by the junction of the side of the nail with its anterior extremity, being imbeded in the substance of the inflamed and ulcerated skin, and thus keeping up the irritation, and preventing the ulcer from healing. This painful and troublesome disease is occasioned partly by an original malformation of the nail, partly by wearing a shoe or boot too narrow for the foot, and partly by cutting the nail too short at its angle, so that it is overlapped by the integument. In order that the patient should enjoy any degree of comfort, and that a chance should be afforded for the cure of the disease, it is indispensible that the sole of the boot or shoe should be sufficiently wide to prevent any injurious lateral pressure. In cases where the disease is of short duration, and of moderate severity, relief may be afforded by lifting up the angle of the nail with the handle of a scalpel, and interposing a small piece of soft linen rag between the nail and the skin. Benefit will also be derived from cutting the free extremity of the nail, so as to present a concave line, the middle of the nail being cut shorter than the angles. The nail may also be soaked in warm water, and scraped with glass, so as to make it thin and flexible. When relief is not afforded by these means the surgeon may avail himself of the plan of treatment suggested by Dr. J. P. Batchelder, of this city. This plan consists in cutting a longitudinal groove in the nail at a short distance from its inverted edge, the groove extended nearly, but not quite, through the thickness of the nail, and then lifting up

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the edge of the nail, and interposing a linen rag between it and the skin. By this means a change in the direction of the nail is effected, sometimes leading to a radical cure.

In the most severe and obstinate cases of the disease, evulsion of the nail becomes necessary. The nail should first be scraped in the middle, and then divided longitudinally with scissors, after which the two lateral portions should be extracted with a chiropodist's forceps. The operation is sometimes performed by extracting only the lateral half of the nail, corresponding with the side on which the inversion existed. I am satisfied, from personal observation, that the relief afforded in this way is not as complete as when both lateral portions of the nail are extracted, and that the new nail which afterwards grows is not as perfect in shape. After removing the nail, the foot should be kept elevated, and cold water dressings constantly applied. As the new nail begins to grow, care should be taken to prevent its margin from being imbedded in the skin, and, as soon as practicable, the margin should be elevated, and a soft rag interposed between it and the integument.

Hyponychial or Subungual Exostosis.—This is a bony excrescence from the dorsal surface of the last phalanx of the toe, where it is covered by the nail. In the great majority of cases, it occurs on the great toe, but it is occasionally seen on one of the smaller toes. It is ordinarily a result of a contusion of the affected toe. The patient complains of pain beneath the toe-nail, and, when the part is examined, the nail is found to be abnormally prominent. The morbid growth is frequently situated so far forward that it elevates the free extremity of the nail, and gives it an abnormal direction. The pain is chiefly occasioned by the resistance which the dense structure of the nail opposes to the growth of the tumor. It constitutes a serious annoyance to the patient, and greatly interferes with his comfort in standing and walking. The indication of treatment is to remove the morbid growth in such a manner as to prevent its reproduction. The nail must first be divided longitudinally with scissors, and the lateral halves extracted with forceps. The bony tumor may then be removed with a chisel or gouge, care being taken to carry the excision below the normal level of the dorsal surface of the phalanx; or, a stratum of the phalanx, including the base of the tumor, may be removed by means of a metacarpal saw. The wound may then be left to granulate and cicatrize. During the healing process the limb should be kept in a horizontal or slightly elevated position.—*Medical Record.*

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REPORT ON VACCINATION AND ANIMAL VACCINE TO THE FRENCH ACADEMY OF MEDICINE.

It is well for the public to be informed on the subject of small-pox and vaccination, for many errors prevail which ought to be corrected. Dr. Danet, charged by the Minister of the Interior to make investigations on the subject, and to report to the Academy of Medicine the result of his researches, after vaccinating 8,500 persons and 40 animals, and, after an extensive observation running through several years, has just reported as follows to the Academy:

1. Small-pox and cow-pox are two distinct diseases.
2. Vaccination does not predispose to other maladies.
3. Vaccination and small-pox lose, after a certain time, their power of preserving from small-pox.
4. Vaccine matter, therefore, no matter what may be the mode of preserving it, has need of being renewed.
5. The predisposition to small-pox is so much the greater as the individual is younger or more aged.
6. Revaccination is an absolute necessity.
7. Those even who have had the small-pox ought to be revaccinated.
8. Vaccine matter, in passing through the human body, borrows from it its constitutional principles; it may, therefore, often be dangerous to vaccinate with vaccine matter from arm to arm. [The Academy of Medicine has already decided that, so far at least as regarded syphilitic affection, it was only dangerous when blood was contained in the matter.]
9. The cow is refractory to the syphilitic virus.
10. The revaccination from the cow to man is the only one which presents all the guarantees of success and security.
11. A febrile condition is in general a cause of failure.
12. Injunction, for preserved vaccine matter, and the multiplicity of scarifications in general, are the best means of success.
13. Preserved vaccine matter ought to be revivified by transplantation to the heifer.
14. Vaccine matter ought not to be used but from the fourth to the end of the sixth day after the operation, and never later.

By a happy sequence, M. Depaul has presented a valuable memoir on animal vaccine, and the Academy has been engaged in a lively discussion thereon. Depaul's paper comes in very well as a supplement to Danet's report, and we, therefore, present the conclusions arrived at in his investigations:

1. The transmission of cow-pox from cow to cow takes place without difficulty.
2. The inoculation in the cases performed by us has always been successful.

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3. The method by incision, originally employed, has no advantage over that by by puncture.

4. No one of the cows inoculated has shown any accidents resulting from such inoculation.

5. A few only have been seized with diarrhœa, in consequence of the change in their food and habitation.

6. The cow-pox matter from Naples was employed in the first three cases, that from Beaugency in the last forty-two.

7. Both these have given identical results.

8. Cow-pox matter loses none of its properties by successive inoculation.

9. The development of the eruption has been more rapid in the cow than in man.

10. The vesicle appeared on the third day, and suppurated from the seventh to the eighth day.

11. In diseased cows the pustules are less well developed than in the healthy animals.

12. The eruption shows itself exclusively at the point inoculated.

13. The general reaction appeared to be nothing, or nearly so; in some of the cows only we noticed a slight prostration of strength and a little heat of the skin.

14. It follows from these experiences that it would be very easy, especially in the great centres of population, to organize a system of animal vaccination.

15. Spontaneous cow-pox is not as rare as is believed. We have met with it twice in the course of our observations.

16. The cow-pox matter that we have employed had an origin whose authenticity can not be questioned.

17. The quantity of cow-pox matter furnished by each animal is sufficiently great to answer for a very extended series of vaccinations.

18. Syphilis is not inoculable in the bovine species.

19. Taken in good condition, cow-pox matter succeeds as often in vaccination as the vaccination from one child to another.

20. Taken after the seventh day it gives results less satisfactory.

21. The cow-pox matter of Naples is not inferior to that of Beaugency.

22. In infants inoculated with cow-pox the period of incubation is sometimes prolonged, and the eruption does not manifest itself until between the ninth and twelfth day.

23. Occasionally the pustules do not develop themselves simultaneously in the same person.

24. The pustules obtained with animal vaccine are more voluminous than those obtained with human vaccine.

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25. The inoculation of cow-pox matter produces in the whole system a more general reaction, especially at the period of suppuration.

26. Invariably this reaction does not assume any serious character in the children inoculated.

27. With reference to the number of pustules the results have been the same with animal vaccine as with that taken from man.

28. A single puncture with animal vaccine has sometimes given rise to two, three, and even four pustules.

29. This occurrence is much more rare than after inoculation with human vaccine.

30 Every method of inoculation succeeds, provided the matter be taken at the right time.

31. Animal vaccine, as well as that from the infant (human), fails often when in has been long preserved.

32. In this respect human vaccine appears to have some advantage over the animal matter.

33. Invariably the animal vaccine preserved in tubes for a month has succeeded.

34. When transported into the country or foreign parts it has given satisfactory results.

35. We can not yet say whether the action of animal vaccine will be more durable and complete than that from the human subject.

36. The number of revaccinations have been too few to warrant positive conclusions on this point.

37. In time of epidemics we ought to send to the infected districts one or more cows, which would furnish all the matter necessary for vaccination and revaccination.—*New York Medical Journal.*

ON THE MANAGEMENT OF WEAK NEW-BORN INFANTS.

Professor Depaul remarks that, while abundant attention is given in obstetric treatises to the treatment of healthy new-born infants and those who are seemingly still-born, little space is devoted to the care of the weakly. This want he endeavors in part to supply. He thinks that authors have not laid sufficient stress on certain deceptive appearances, which seem to imply that the infant is out of danger because it takes the breast and seems to suck.

The fact is, however, one of very common occurrence; the infant apparently sucks, but does not increase in weight, and after a time discontinues its fruitless efforts, screams more fre-

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quently, and wastes away. In order to discover whether suction is efficiently performed, the child should, at the time he appears to be taking the breast with most vigor, be removed from its nurse, and the presence or absence of milk in its mouth be ascertained. The paid nurses at the hospital are required every day to make this experiment. Mr. Depaul also endeavors by all means to rouse from their indolence the wet nurses to whom puny, delicate infants have been entrusted, when the nursling takes the breast but imperfectly. Under the circumstances, it often happens that the infant has not strength to suck, and the finest nurses are provided in vain. The best nurse in such cases is not the woman who has the largest supply of milk, but one whose milk flows easily and drops without effort into the child's mouth. If a nurse of this kind can not be procured, milk of a good quality should be obtained and given mixed with thin gruel. Every hour or two, day and night, from one to three teaspoonfuls of diluted milk should be administered. Should this kind of food give rise to colic, Scanzoni recommends the addition of a little fennel or dill water; and, as soon as the child has gained in strength, it is proper to procure for it a good wet-nurse, and this should not be too long delayed, lest the habit of receiving nutriment into its mouth without any effort may prevent the infant ever taking to the breast again, a circumstance which occurred in the case of a young prince, at present living in exile; the nurse should then be instructed to draw her own milk with an exhausting glass; but this can seldom be obtained from a mercenary nurse, and scarcely ever succeeds but with mothers who rear their own children.

It should further be remarked that in primaparæ the nipple is often so large or so hard, that if the child is not very strong its efforts at suction are unavailing. The mother is then in fault, and it is therefore highly expedient to ascertain the condition of the breast in gravid women, in order to form an opinion as to the possibility of their nursing.

It is absolutely necessary, in addition to the measures calculated to restore and increase the strength of the infant, carefully to shield it from the influence of cold, and to adopt every precaution to preserve the temperature of the body at the physiological standard. Warmth is for infants, especially for new-born infants, the indispensable condition of the continuance of life. None but the strongest children can bear any loss of temperature. The weak invariably perish if exposed to cold, and Hunter sagaciously noted the fact, and strongly objected to the practice prevalent in his day of bathing very young children in cold water for the alleged purpose of invigorating their constitution. When, therefore, a child is prematurely

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born, or naturally weak, it should be carefully enveloped in warm clothing, kept in a comfortable bed, and guarded in every possible manner from adverse atmospherical influences. The thermometer should be daily consulted, and hot water bottles used, if necessary, to maintain the heat of the body at a proper height.

By means of these precautions, and if required by the exhibition of aromatic and stimulating remedies, Mr. Depaul has had the good fortune of restoring, in the course of two or three weeks, children supposed not to be viable, to a normal state of development. Untiring supervision is always indispensable, as any neglect of these all-important points may entail irremediably fatal consequences.—*Journal of Practical Medicine.*

THE DIFFERENCES BETWEEN MAN AND THE APE.

On the occasion of a paper on this subject by M. Schaafhausen, of Bonn, read before the Paris Anthropological Society, M. Gratiolet thus expressed the result of his researches. He thought that there existed no reason for establishing an anatomical similitude between man and the gorilla. "As regards the brain, the gorilla's is the lowest of the anthropoid apes, since the brain does not cover the cerebellum, by which he approaches the cynocephali. It is not in his size and strength that we must look for human characters, but in the conformation of the hands, and just in this he differs considerably from man. The thumb is very short in the gorilla, and its muscles much reduced. The long flexor is replaced by a tendinous tract, the origin of which is lost in the tendinous sheaths of the flexors of the other fingers. It follows that the thumb has no independent movement of opposition. In the orang, though the thumb is shortened, it is still capable of an independent flexion; but this depends on a peculiar disposition which he had lately verified with M. Alix. In point of fact, the proper flexor of the thumb is entirely absent in the orang; there is not even found that tendinous tract existing in the gorilla; but, by a singular contrivance, the marginal fibres of the adductor muscle of the thumb terminate in a tendon which is placed in the axis of the first terminal axis." "The fact which establishes a great relation between man and apes is, that in them the optic nerves open directly in the cerebral hemispheres, whilst in the other vertebrates these nerves reach the brain only by the intermediation of the tubercula quadrigemina. This peculiarity may explain the existence of a certain conformity in the manner in which man and ape perceive their sensations.

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But it does not follow that there is an identity in the nature of their intelligence; for though the senses are subservient to the operations of the intellect, it can not be said that they produce it. Man must be placed by the side of the ape, but only as an animal. Man is a being apart, just as all other vertebrata must must be separated, as they can not be considered as having originated from each other." M. Gratiolet that, as a pupil of Blainville, with whom originated the idea of a series in natural history, he felt bound to state how much the ideas of his master had become modified. Where Blainville formerly recognized transitions from group to group, he, in the latter period of his life, only saw maxima and minima of realization for each group. He acknowledged an ideal series between types, but not a lineal series between all beings. It is thus impossible to invoke the opinions of Blainville for the support of theories tending to reduce to a single stock the numerous species composing the animal kingdom.—*Medical Times and Gazette.*

THE ART OF PRESCRIBING.

The London *Lancet* for June, 1867, says: "It is to be doubted whether the improvement in the art of prescribing has kept pace with that of our knowledge of drugs and chemical combinations. Be that as it may, in some of the prescriptions that are handed to the pharmaceutist to dispense, the most incongruous intermixture of remedies, most dissimilar and contradictory in action, is ordered; whilst chemical considerations are set at defiance, and no regard is paid to the often complex changes that must take place upon the admixture of several different preparations, whose original properties are often completely altered. The real intentions of the prescriber are thus defeated, and the cure indirectly delayed.

"Mr. Daniel Hanbury recently discussed this subject at a meeting of the Pharmaceutical Society. He referred first of all to *unchemical formulæ*, giving as illustrations the combination of chloride of barium, sulphate of iron, and extract of gentian; the chloride being thus rendered inert: and, secondly, a prescription containing iodide of potassium, bicarbonate of potash, citrate of iron and quinine, ammoniated tincture of valerian, and water, the result being the production of a frothy, white precipitate of quina, forming a mass suitable for pills. And this exemplifies a point not sufficiently well known—that quina does not combine with ammonia or an alkaline carbonate. Unexpected combinations sometimes result, of which the fol-

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lowing is an example: A prescription was written for a mixture, of which the more essential ingredients were Rochelle salts and calcined magnesia; this was taken without particular remark until a dose was swallowed from a bottle of the medicine which had been prepared some weeks. The effect was so disagreeable, and the taste so caustic, that the patient believed some error had been committed, and special inquiries resulted in the explanation that the calcined magnesia, by prolonged contact with alkaline tartrates, had gradually abstracted their tartaric acid, leaving the alkalies in a free and caustic condition.

ON AN ALIMENTARY PREPARATION FOR REPLACING HUMAN MILK FOR CHILDREN.

Human milk of a person in good health contains, per cent., caseine, 3 1; sugar of milk, 4.3; butter, 3.1. Baron von Liebig concluded therefrom that woman's milk contains: Blood-forming principles, 1 part; heat-producing principles, 3.8 parts. By mixing flour and milk in certain proportions, it is easy to compose a food in which the two nutritive principles are in the same proportion as in human milk, viz.: 1 to 3.8. Cow's milk contains, on an average, 4 per cent. of caseine, 4.5 of lactose, 2.5 of butter. If we take, then, 10 parts of milk, 1 part of wheat flour, and 1 part of ground malt, we have a mixture satisfying all the necessary conditions. For preparing this the author recommends the following method: A mixture is made of 15 grammes of wheaten flour, 15 grammes of ground malt, and 6 grammes of bicarbonate of potash; 30 grammes of water and 150 grammes of milk are then added. The whole is then heated and continually stirred until the mixture begins to thicken. It is then taken off the fire and stirred all the while. After five minutes it is boiled, and then strained through a wire or hair sieve. The ground malt necessary for this preparation is easily furnished by barley malt, obtained at any brewery. It can be ground in a common coffee-grinder, and then passed through a sieve. If this preparation is well made, it is as sweet as the natural milk; it is fluid enough, and keeps for twenty-four hours. In Germany the use of this food is very extensive, and its nutritive qualities are found to be excellent. It has a slight taste of flour or malt, to which children get accustomed; in fact, they soon prefer it to any other kind of food.—*Trans. Acad. Sciences, Paris.*

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THE MEDICAL REPORTER.

ST. LOUIS, AUGUST 15. 1867.

REVIEWS.

ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE. A Handy Book for Students and Practitioners. By HENRY HARTSHORNE, M. D. Philadelphia: Henry C. Lea. 1867.

This is a very excellent work as an epitome of the experience of the author in a twenty years' practice in hospital and private. We like it as a hand-book, to be taken up or laid down according to the whim of the moment. While it may answer this purpose, and may be relied on for the facts which it contains, we can not recommend it for any continued study, such as the student should pursue during his collegiate career.

These books may answer for reference as to a dictionary, but are of very questionable utility to the younger man, as they beget a habit of indifference to the larger works, which are to be acqvired at the cost of much labor, but which, at the same time, develops the thinking faculties and prepare the way for the ultimate use of these hand-books.

We see, however, in this work the results of great thought and pains-taking, and are willing to accord to the author all the merit so justly deserved for the completion of so great a self imposed task.

THE PRINCIPLES AND PRACTICE OF DISINFECTION. By ROBERT BARTHOLOW, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Ohio, etc., etc. E. W. Carroll & Co., Publishers: Cincinnati. 1867.

This is a neat little work of 110 pages, devoted to the consideration of the subject of disinfectants: how they act; where they may be ap- plied; and the chemistry of the whole matter—for to this we are indebted for most that we know about them. This is not a mere history or compilation—it has in great measure been tested by the observations and experiments by the author as belonging to the great subject of Hygiene, the groundwork of medicine, concerning which we are all interested at the present time. It is of service as well to the

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physician as the citizen, and we warmly recommend it for general perusal. The author is well known in the profession as an ardent laborer in the cause of science, and gives authority and character to the work.

The Present Raid on the Uterus.—We have been astonished and often shocked, at the temerity with which operations on this small and generally unoffending organ are practiced of late years. We expressed, some time ago, our disapprobation of the operation of clitorodictomy, which, we are pleased to see, has received the unqualified disapproval of the profession; and we feel assured that future inquiries will lead to many, very many, conservative modifications of the present disposition to cut and slash the uterus. The following extract from the address of Dr. W. D. Buck, President of the New Hampshire Medical Society for 1866, we insert as a warning in the right direction:

A distinguished surgeon in New York City, twenty-five years ago, said, when Dupuytren's operation for relaxation of the *sphincter ani* was in vogue, every young man who came from Paris found every other individual's anus too large, and proceeded to pucker it up. The result was that New York anuses looked like gimlet-holes in a piece of pork. It seems to me that just such a raid is being made upon the uterus at this time. It is a harmless, unoffensive little organ, stowed away in a quiet place. Simply a muscular organ, having nó function to perform save at certain periods of life, but furnishing a capital field for surgical operations, and is now-a-days subject to all sorts of barbarity from surgeons anxious for notoriety. Had Dame Nature forseen this, she would have made it iron-clad. What, with burning and cauterizing, cutting and slashing, and spitting and skewering, and pessarying, the old fashioned womb will cease to exist, except in history. The *Tranactions* of the National Medical Association for 1864 has figured one hundred and twenty-three different kinds of pessaries, embracing every variety, from a simple plug to a patent threshing machine, which can only be worn with the largest hoops. They look like the drawings of turbine water wheels, or a leaf from a work on entomology. Pessaries, I suppose are sometimes useful, but there are more than there is necessity for. I do

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think that this filling of the vagina with such traps, making a chinese toy-shop of it, is outrageous. Hippocrates said that he would never recommend a pessary to procure abortion—nay, he swore he never would. Were he alive now he would never recommend one at all. If there were fewer abortions there would be fewer pessaries, and if there were fewer pessaries there would be fewer abortions. Our grandmothers never knew they had wombs only as they were reminded of it by a healthy fœtus; which, by the by, they always held on to. Now-a-days even our young women must have their wombs shored up, and if a baby accidentally gets in by the side of the machinery, and finds a lodgment in the uterus, it may, perchance, have a knitting-needle stuck in its eyes before it has any. It is the easiest thing in the world to introduce a speculum and pretend to discover ulceration of the os, and subject a patient to this revolting manipulation once or twice a week, when there is, in fact, nothing the matter. By some practitioners, all diseases which occur in the female are attributed to the uterus. In this class are especially to be included all such as make of the abnormal conditions of the uterus a specialty.

Consanguineous Marriages.—We would call attention to the following, and trust it will be responded to by such of our readers as can furnish the required information:

At a late meeting of the "Medical Society of the State of New York," it was resolved, "That a committee be appointed to investigate and report upon the result of consanguineous marriages, &c."

If such marriages come under the observation of the members of the profession, they will confer a favor by answering the following questions, and transmitting such report, before November next, to the undersigned, one of the committee appointed:

1. Name (initials) and age of husband.
2. Nativity.
3. Age when married.
4. Constitution.
5. Health, deformities, peculiar diathesis.
6. Health of his family, hereditary diseases, deformities, &c.
7. Name (initials) and age of wife.
8. Nativity.
9. Age when married.
10. Constitution.
11. Health, deformities, peculiar diathesis.

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12. Health of her family, hereditary diseases, deformities, &c.
13. How are the parties related to each other?
14. How long married?
15. How many children, or sterility?
16. Abortions; cause; how many, and at what period?
17. Children died, at what ages and from what diseases?
18. The constitution, age and present health of living children, deformities, mental conditions, idiocy, cretinism, deaf, mute, blind, epilepsy, albinism, insane, &c.
19. Remarks and other information.

Address, ROBERT NEWMAN, M D.,
118 W. Houston Street, New York.

VITAL STATISTICS OF ST. LOUIS.

From July 1, to August 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	340	Still Born	38
White Females	248	Under five years of age	411
Colored Males	20	Between five and twenty years	41
Colored Females	12	Between twenty and forty years.	81
Born in the United States	512	Between forty and sixty years	37
Born in Germany	64	Between sixty and eighty years	14
Born in Ireland	41	Bet. eighty and one hundred y'rs	3
Born in other countries	13	Total	626

DISEASES.

Accidents	10	Epilepsy	2
Abscess	8	Fever Typhoid	45
Apoplexy	5	Fever Bilious	5
Asphyxia	4	Fever Puerperal	4
Ascitis	2	Fever Intermittent	12
Bronchitis	6	Fever Remittent	8
Burns	2	Fever Congestive	4
Cardtis	4	Gastritis	2
Cancer	1	Hepatitis	6
Cerebritis	12	Hemorrhage	3
Cholera Morbus	20	Hydrocephalus	10
Cholera Infantum	64	Labor	2
Convulsions	46	Marasmus	33
Congestion of Brain	18	Meningitis	28
Cyanosis	1	Old Age	1
Croup	3	Premature Birth	5
Diarrhœa	28	Paralysis	4
Dysentery	17	Peritonitis	6
Dentition	15	Poisoning	3
Drowned	5	Pertussis	12
Diphtheria	2	Phthisis	37
Delirium Tremens	2	Pneumonia	27
Disease of the Heart	5	Scarlatina	9
Enteritis	20	Scrofula	2
Eclampsia	3	Sunstroke	2
Encephalitis	5	Trismus	10

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THE SAINT LOUIS
MEDICAL REPORTER,
A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, SEPTEMBER 1, 1867. No. 13.

HOSPITAL REPORTS.

SURGICAL CLINIC AT THE ST. LOUIS (SISTERS') HOSPITAL; SERVICE OF PROF. R. H. GREGORY, OF THE ST. LOUIS MEDICAL COLLEGE.

(Reported for The St. Louis Medical Reporter by T. Fox, Student.)

CASE 1.— *Paraphymosis.* John S., æt. 36 years, presented himself with a paraphymosis of two weeks' standing. The patient was placed under the influence of chloroform, and the paraphymosis reduced by careful manipulation, resulting in complete cure.

In commenting on this case Prof. Gregory said: "The constricting band in paraphymosis is the preputial orifice which is situated at the bottom of the narrow groove constricting the corpora cavernosa. The groove is half an inch behind the corona glandis, and separated from it by the red tumid collar, which is evidently the lining membrane of the prepuce. By carrying a narrow blade to the bottom of the groove and cutting longitudinally ever so slightly, the constricting band is readily divided. The mistake is too common, that it is possible to relieve the stricture in these cases by the use of scissors, and that the seat of strangulation is immediately behind the corona glandis."

Since the introduction of chloroform it is seldom necessary to appeal to the knife in these cases.

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CASE 2.—*Paracentesis Thoracis.*—Mary Marks, æt. 35 years, entered the Hospital June 1 to be treated for some trouble in the chest, which was diagnosed to be a fluid accumulation in the pleural cavity, and was very evident on change of position of the patient. There was bulging of the intercostal spaces; the heart was displaced so that its apex beat to the right of the sternum. The splashing sound was so distinct as to be audible to the patient herself. The disease resisted all the usual remedies in such cases, and the operation of Paracentesis Thoracis was proposed, but delayed from time to time, to give other remedies a fair trial, until August 21, when it was determined to operate. Before the operation Prof. Gregory remarked that, from the existing œdema, and the fact of the accumulation resisting the action of the usual absorbent and deobstruent remedies, the contained fluid might be pus, which proved to be the case, as on the introduction of the trocar and canula more than four pints of pus flowed out. The trocar was introduced posterior to the lateral median plane of the body and against the middle of the eighth rib, the point carried over its superior border, penetrating the pleural cavity. In this manner a valvular opening is made which closes on the withdrawal of the instrument, and prevents the introduction of air. The result thus far after the operation is a success, and demonstrates the correctness of Prof. Gregory's diagnosis. The patient is much improved. The lung has resumed its proper function and the heart beats in its natural position.

CASE 3.—*Reduction of Dislocation of the Humerus of two weeks' standing.*—Elizabeth Powers, æt. 40 years, presented herself at the clinic with a dislocation of the right humerus into the axilla, caused by a fall. She stated that the accident occurred some two weeks previous, and that immediately after the fall she applied to a druggist who stated that he had replaced the arm place; but experiencing no relief, she now applied for an operation.

The patient being placed under the influence of chloroform,

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Prof. Gregory reduced the dislocation in the following manner: A folded sheet being passed under the axilla, and extension made upon it by assistants to fix the scapula, a clove hitch was taken upon the forearm, by which counter extension was made, and by placing the heel in the axilla the reduction was accomplished without difficulty.

CASE 4.—*Operation for Congenital Phymosis.*—Robt I., æt. 23 years presented himself before the clinic with congenital phymosis. The meatus urinarius was almost occluded, only admitting a small probe with difficulty. It was relieved by the following operation: The integuments and superficial areolar tissue was pinched up in such a manner as to exclude the frenum, held with the forceps and removed to the point where it becomes continuous with the lining membrane of the prepuce. Then the prepuce was slit open to a small extent, the sac everted and attached by suture to the common integuments. The operation was eminently successful.

REVIEWS.

HISTORY OF THE AMERICAN CIVIL WAR. By JOHN WILLIAM DRAPER, M. D., LL. D., Professor of Chemistry and Physiology in the University of New York, Author of a "Treatise on Human Physiology," "A History of the Intellectual Development of Europe," etc., etc. In three volumes. New York: Harper & Brother. 1867.

We have received from the publishers the first volume of the above interesting work, which contains the cause of the war, and the events preparatory to it up to the close of President Buchanan's administration. Dr. Draper has adopted in the present work that style, so excellent in his previous works, of treating the subject in its physiological as well as historical relations; and although it is considered impossible to write concerning recent events without showing partiality and partisan feeling, we are pleased to say that the present work is an exception to the rule. Dr. Draper says in his preface, his "work is intended to be a history of the causes which led to the civil

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war, and of the events connected with it considered, not in a partisan, but in a philosophical and impartial spirit."

The present volume is divided into the following sections for consideration:

I. Physical characteristics of North America; the topography of the republic.

II. The character of the colonial and subsequent population.

III. The tendency to antagonism impressed upon that population by climate and other causes.

IV. The gradual development of two geographical parties, the North and the South.

V. Their struggles for supremacy in the Union.

VI. The rupture between them.

In treating the above subjects Dr. Draper gives, first, a geological and geographical history of the western continent, showing the nature of the soil, climate and altitude, with its natural effect on the development and progress of its inhabitants; and, second, the origin and nature of the various races which inhabit our country, with the effect of climate and institutions on and effecting the population developing that natural antagonism which gave birth to the causes finally resulting in our civil war.

It would be impossible for us to review in detail the work; suffice it to say that each part is treated with that philosophical and impartial spirit so eminently peculiar in the style of the gifted writer. Plainly, yet forcibly expressed, concise, yet clearly set forth, no one can read the work without fully understanding it, as well as realizing the great knowledge and research of the author.

We earnestly commend the book to our readers as well worth their attentive perusal—as one of the best works of the age.

Could our so-called politicians and law-givers read all of Dr. Draper's works, together with those of Buckle, Mott, Gliddon,

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and others, we would have less conflict of ideas, more adaptability of laws to the people governed, and less of that gross partisan spirit which has so nearly brought our noble country to destruction. We return our thanks to the publishers for the present volume, and will cheerfully notice the others as received.

OBSTETRICS; THE SCIENCE AND THE ART. By CHARLES D. MEIGS, M. D., lately Professor of Midwifery and the Diseases of Women and Children in Jefferson Medical College, Philadelphia, etc., etc. Fifth Edition, Revised, with one hundred and thirty illustrations. Philadelphia: Henry C. Lea. 1867.

This very excellent work on the science and art of obstetrics should be in the hands of every student and practitioner. The rapidity with which the very large editions have been exhausted is the best test of its true merit. Besides, it is the production of an American who has probably had more experience in this branch than any other living practitioner of the country. He is one of the very few examples whose knowledge has been profitable to his medical brethren. Burdened with a heavy practice, he has always found time to teach and to write. Having reached a time of life when it is proper and becoming that he should rest, he has not hesitated to add one more duty, as a crowning act, that of very carefully revising a new edition. The same plan is pursued as in former editions; the simple and instructive style is there with which we all are so familiar; it is brought up to the times in all that relates to obstetrics, and it should be the pleasure of every physician to preserve it as a memento of one who has worked so faithfully. The work must always hold a high rank, not only in this country, but even in Europe, whence emanates from such high sources so much that is valuable in obstetrics.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. VOL. XVII.

We notice somewhat tardily the voluminous productions of the Association—not from any indifference, on the contrary, it is filled with most valuable material, but from the pressure on our pages these few months back.

The work comes to us, as usual, in good form; the presswork

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is admirable, the matter excellent. Notwithstanding the objections that may be made to this annual meeting of physicians, one must acknowledge that volumes of positive knowledge are produced through its agency which otherwise would have never seen the light. We are under many obligations to the Publishing Committee for the volume before us.

REMARKS ON THE OPERATION OF J. MARION SIMS FOR DYSMENORRHŒA, DEPENDING ON ANTEFLEXION OF UTERUS.

By J. C. Nott, M. D., Baltimore.

But a few years ago the words Dysmenorrhœa, Amenorrhœa, Leucorrhœa Polypi, Ulceration of Os Uteri, et id omne genus, called up in my tortured brain a hideous uterine hydra, that I had been fighting unsuccessfully, with all the odds against me, and so unsatisfactory were all my efforts that I actually turned away with disgust from this class of maladies, and threw them off upon professional colleagues. The physiology of the uterus was little known, its pathology less, and least of all did we understand the diagnosis of its endless maladies.

But thanks to the teachings of Dr. Simpson, of Edinburgh, and our countryman Dr. J. Marion Sims, a better day is dawning; an immense stride has been made in positive knowledge, and although we have yet much to learn in this department, it must be confessed, that it really begins to assume the aspect of a science instead of blind empiricism; many of these diseases, before obscure, are now easily diagnosed and treated, on fixed rational principles. The uterine sound, bi-manual palpation, Sims' speculum, sponge tents, improved position of the patient, &c., now enabled us to diagnose with accuracy many important diseases that previously were merely guessed at and treated by the most vague empiricsm.

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As already remarked, we have yet much to learn in uterine surgery and therapeutics. All reformers, whether in politics, religion, or medicine, are prone to run into extremes, and while on the one hand they often fail to follow truth onwards in a direct line, they on the other leave behind errors to be corrected by other sober minds that follow them. Bennet ran wild on diseases of the *os and cervix uteri*, and committed excesses with his caustics. West, the representative of another school, takes the opposite extreme and attaches comparatively little importance to these affections. Then came Simpson and Sims with the knife and sound in hand, and tell us that many of the maladies heretofore treated by caustics, washes, leeches, drugs, &c., are not to be treated without the knife. Now they are probably all wrong and all right; more light is wanted, and the *juste milieu* is yet to be sought.

I confess that I come back, after reading the works of Simpson and Sims, to uterine surgery and therapeutics with feelings very different from those which induced me to abandon this practice a few years ago. I now feel competent to diagnose and treat many cases which were formerly beyond my reach, and shall be much gratified if I can aid in calling the attention of others to the points at issue.

The first case to which I ask attention is the type of a large and troublesome class, and one which has interested me greatly.

Case I. *Anteflexion of uterus; elongated, conical neck, and contracted os; dysmenorrhœa; relieved by amputation and incision of neck.*—Mrs.——came from the country to consult me on the 10th Dec., 1866; aged 23; been married ten months; commenced menstruating at twelve years; had no difficulty for two or three years, after which dysmenorrhœa commenced and has continued without intermission ever since, causing violent suffering for the first one or two days, and sometimes more, of each period; menstruation usually lasted five or six days, and the discharge was more profuse than natural; complexion good; general health pretty good; nervous system much deranged at the monthly periods.

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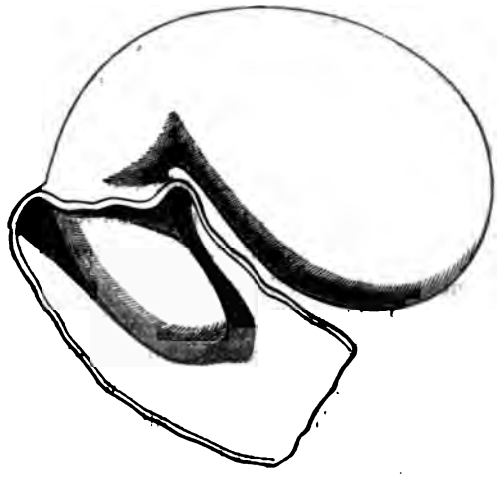
Fig. 1.



On examination, the uterus was found low in the vagina and greatly anteflexed; the fundus was readily touched by the finger, behind the symphysis, and by passing the finger onwards in the vagina the os was easily reached, the neck being curved downwards and forwards. Fig. 1 gives a sufficiently accurate idea of the form, size, and position of the organ. The neck was small, conical, and projected about an inch below the reflection of the vagina in front and a little more behind. The os was round and small; a sound, very much curved, was with difficulty introduced a little more than two inches; the whole organ was under size. Although married about ten months had never conceived, and there was every reason to believe that both dysmenorrhœa and sterility were results of the anteflection, elongated conical neck, and contracted os.

By a little manipulating with one finger in the vagina and the opposite hand on the abdomen, it was easy to work the fundus up into its normal position. As the fundus went up the long curved neck swept down in the opposite direction, as the movements of one end of a little crooked cucumber would be governed by those of the other end. The os uteri by this movement was brought within an inch and a half to two inches of the vulva.

Having satisfied myself fully as to the nature of the case, and the applicability of the principles laid down by Dr. Sims, I, on the 17th Dec., 1866, with the assistance of my friends, Drs. F. E. Gordon and J. T. Gilmore, proceeded as follows:

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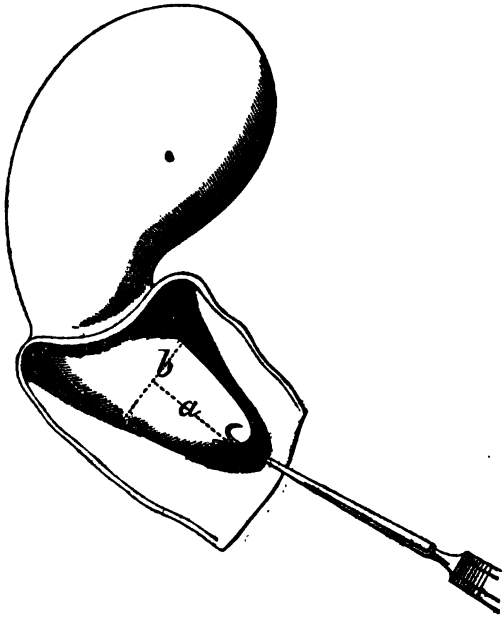
The patient was placed in Sims' "semi-prone position," and fully chloroformed; the vagina being then fully exposed by Sims' speculum, a tenaculum was hooked into the interior lip of the os, which, with a very little force, was drawn down to a convenient point for operation Fig. 2.

Fig. 2.



With a pair of strong straight scissors, the neck was then divided on either side, through its entire thickness, from half to three-quarters of an inch, as seen in Fig. 2, dotted line *a*, according to Sims' "bi-lateral" method. While held in this position with the tenaculum by an assistant, as seen in Fig. 3, the *posterior* lip was seized with another tenaculum and removed at a blow with a pair of curved scissors, as seen in Fig. 3. Next, in accordance with the rule of Dr. Sims, I introduced a blunt pointed tenotomy knife into the cervical canal, and carrying it up to the superficial at the *os internum*, made an incision *backwards*, as seen in Fig. 3, dotted line *c*, superficial at the *os internum*, but extending through the entire thickness, as the incision reached the truncated margin. This last cut straightened the canal, gave an easy entrance into the cavity of the body of the uterus, and a sponge tent was introduced,

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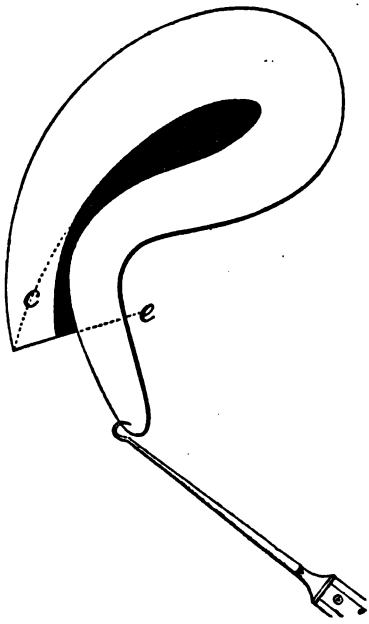
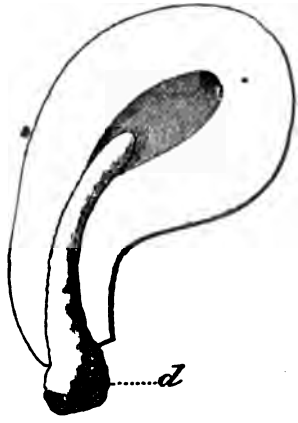
Fig. 3.



as seen in Fig. 4, to be left *in situ* with the view of preventing healing by the first intention and consequent closure of internal os—see sponge tent *d* extending up into the cavity.

Fig. 4.



The operation was then completed by removing the anterior lip with the curved scissors, as seen in Fig. 3, at dotted line *e*. Fig. 4 represents the operation after it is completed: the neck amputated, the internal posterior cut made, and the sponge introduced.

A glance at Fig. 2 shows the great advantage of the small tenaculum hooked into the *anterior lip;* the traction on the anterior lip not only brings down the os, but,] to a great extent, *corrects the abnormal flexion* of the organ, thus facilitating greatly the *internal* incision of the cervix and the introduction of the sponge tent.

By comparing my operation with the plan laid down in such cases by Dr. Sims, it will be seen that I have deviated in two important particulars—1st. I amputated the *posterior* lip first, instead of the anterior. 2d. I introduced the sponge tent *immediately*, while Dr. Sims usually allows several weeks to pass before using the tent.

Now a glance at Fig. 3 shows that if the *anterior* lip had been first removed, and the traction made with the hook on the posterior instead of the anterior lip, the opening into the cervix would have been *closed*, and the introduction of the tent made difficult, if not impossible. By keeping a firm pull on the an-

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terior lip, after the posterior one is amputated, as in Fig. 3, the channel is pulled open and the tent slips in with the greatest facility. The internal cut backwards is also rendered very easy by the traction on the anterior flap.

Dr. Sims does not introduce a tent *at the time of this operation*, and tells us that one of the objections to his operation, and difficulties to be contended against, is the tendency of the cervical canal to contract again in spite of his internal incision. To overcome this contraction he tell us that a second operation is usually necessary by incision and tents; so great, in fact, is the tendency to contract that not unfrequently the cutting and tents have to be repeated several times.

Fig. 4 represents the uterus after the amputation of the neck is completed, the internal incision made, and the tent introduced.

All the above steps of the operation are easily and quickly accomplished, but I must now call attention to an oversight, for which I deserve censure. When, after the bi-lateral incisions were made, the posterior flap was cut off, an artery was seen spirting from the truncated surface.*

I might then (as the uterus was firmly held by the tenaculum in a very convenient position) have easily ligatured the vessel; but never, in any amputation of the cervix uteri, having had troublesome hemorrhage, I did not, with the *liquor persulphas ferri* at hand, anticipate it here. Without waiting for the arrest of hemorrhage, I cut off the anterior flap at once and depended on the tampon. A wad of cotton, saturated with one part of the iron to three of water, was thrust down to the bottom of the vagina, and dry cotton packed in on this to hold it in place. In spite of all this hemorrhage continned to such an extent that I thought it prudent, at the end of an hour, to remove all the dressings and coagula; a bivalve speculum was introduced; the vagina thoroughly sponged out and again carefully and tightly tamponed with the iron and cotton.

Still the blood continued to trickle slowly through the cotton for two hours, and symptoms of prostration became so marked as to make me uneasy. I then resorted to the following expedient: A glass syringe with a long nozzle charged with four ounces of the persulph. ferri, diluted as above, was inserted deep down, beside the cotton, to the bottom of the vagina, and the whole contents gradually driven in; I then placed my hand on the vulva and pressed firmly for a few minutes, so as to retain the injection and give time for coagulation of the blood. This produced the desired effect; and the hemorrhage ceased; the patient soon reacted, and by nine o'clock at night (eight hours after the operation) she was well enough for me to take my leave for the night without further anxiety.

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It had been necessary during the evening to give her opium and brandy.

18*th*. In satisfactory condition this morning; did not sleep much during the night; was a little nervous; pulse good, and is quite cheerful.

20*th*. Has continued well; no pain or fever; takes plenty of nourishment and sleeps well.

The extension of the vagina from the tampon and coagulated blood has been a source of a good deal of uncomfortable feeling, and to enable her to pass her urine, the part of the cotton and coagula in front pressing on bladder and urethra were removed the morning after the operation. The vagina was as completely filled by the cotton and coagula as it would have been by the head of a fœtus at term. The coagula too made by the persulphate of iron are as hard as cheese. By means of a spoon-handle I prized out part of it yesterday, and the remainder to-day, together with the last of the cotton, and the sponge tent, which was found loose in the vagina. She was greatly comforted by the removal of this mass, and a free washing out with tepid water and cloride of soda. No examination of uterus yet made.

29*th*. Has progressed well in every respect since last report; requires no treatment but ablutions with tepid water and Darby's prophylactic; has been sitting up and walking about the room comfortably. Has had for two days previous to yesterday a little bloody discharge, *without any pain*, which was doubtless her catamenial flow, though less than usual in consequence of the recent hemorrhages she had undergone. Examined the os uteri with speculum and found the cut surface covered with healthy granulations and healing well. Permitted to go home with the injunction to return to Mobile by the 15th Jan., being to or three days in advance of the next menstrual period.

Jan. 19. Arrived in town yesterday looking and feeling well. On examination I could detect neither anteversion nor flexion; the position of uterus seemed normal; the os *in situ*, with a patch of granulations about the size of the little finger nail, not yet healed over. *Catamenia came on last night moderately, naturally, and without the slightest pain*, and this morning I found her walking about the room and anxious to go out shopping.

25*th*. Catamenia ceased on the fifth day, having passed through without discomfort. Discharged and sent home; apparently perfectly cured, except a little speck of granulations which will doubtless heal in a few days; directed to use with a syringe night and morning a heaping tablespoonful of common salt to a quart of water. I may here remark that this is one of

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the most invigorating and soothing washes for the vagina I know, and this idea was taken from an article in the London *Lancet* by Dr. Thudichum on injections of the nostrils; he found the salt and water much less irritating to the Schneiderian membrane than simple water, and this I have proven again and again in ozæna.

I repeat that the above case is typical of a large class that heretofore have been incurable, and although the procedure recommended may not be infallible, I feel assured that, if properly managed, it will bring relief to many whose lives are passed in suffering.—*American Journal of Medical Sciences.*

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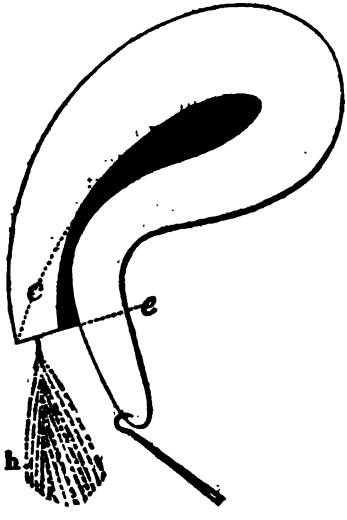
* The following is an extract from a letter from Dr. Nott, August 1st, which we insert as further illustrating his meaning as well as the additional cut No. 5.—Eds. St. Louis Med. Reporter.

Dr. O. F. Potter:

Dear Sir—The enclosed cut No. 5, will further illustrate my meaning in article above. By this you see that the artery spouting (Fig. 5 *h*) is from the *truncated flap*. There was no hemorrhage from the *internal cut*, (Fig. 3 *c*) As stated in article above I saw the artery (Fig. 5 *h*) spouting from the *truncated surface*, and ought to have ligatured it at once, but having never had troublesome hemorrhage in former operations for amputating of the neck, I omitted the ligature, or rather thought it unnecessary in the present case, in which opinion I was mistaken. I have never had at any time troublesome or alarming hemorrhage from the internal cut, or from the division of the os internum, and should such hemorrhage occur at these points, I think its arrest would be certain by the use of the sponge tent, and then fixing in situ by the cotton tampon soaked in the *liquor persulphas ferri*. Such, at least, has been my universal experience. Yours, J. C. Nott, M. D.

Fig. 5.



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HINTS ON THE USE OF SPONGE TENTS IN UTERINE AFFECTIONS.

By J. C. Nott, M. D., Baltimore.

It would seem paradoxical to assert that *sponge tents*, or any other one remedy is applicable to the treatment of maladies apparently so opposite as suppression of the menses, dysmenorrhœa and menorrhagia, and yet the facts I shall give will bear me out in the belief that certain forms of each of these affections are better treated by this remedy than by all others combined. The principles, too, on which they act in each case, are well recognized in every treatise on inflammation.

A common, I may say the most common, cause of dysmenorrhœa, is mechanical obstruction to the menstrual flow from narrowness of some part of the cervical channel of the uterus, whether congenital or acquired. In such cases all agree that *dilitation is the remedy*, although much diversity of opinion exists as to the best manner of effecting it. The sponge tent certainly answers well in many cases, and if properly managed, my experience is, that it will meet all the indications in the great majority of cases. It being admitted, then, that sponge tents are a remedy for dysmenorrhœa, I will not consume time on this point, but proceed at once to show their applicability to amenorrhœa and menorrhagia. It will incidentally appear, too, that when these diseases are relieved, many cases of version and flexion, depending on such derangements of function, disappear with the original disease.

Case 1.—Mrs. D———, from the interior of Alabama, came to consult me on the 7th December, 1866, giving the following history: Aged 28; had originally an excellent constitution, and weighed 140 pounds when married; married early and had one child at term, which is still living; had a miscarriage seven years ago, since which time her health has been bad, and she has not been pregnant. She is now pallid, emaciated, dyspeptic and nervous; suffers occasionally, generally at intervals of three or four weeks, with severe uterine pains, to relieve which she has got in the habit of taking four or five grains of morphine daily. She is also in the habit of "dipping" snuff.

Further, states that for years since the miscarriage she had labored under troublesome leucorrhœa, with ulceration of os-uteri, for which she was treated in the country by several Physicians; had exhausted all remedies, general and local, and among others, had used caustics repeatedly to the ulcers. Menstruation had been pretty regular, until the last fourteen months, during which time the *suppression had been complete*, and it was during the existence of this suppression that she had suffered from the uterine pains above aluded to.

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On examination with the speculum, I was struck by the remarkable healthy appearance of the vagina and the entire absence of leucorrhœa. The uterus was completely anteverted, the fundus presenting, at the lower part of the symphysis pubis, the os tilted up toward the promontory of sacrum, and difficult to reach. By means of two fingers of one hand in the vagina, and the other on the abdomen, I, without much difficulty, pushed the fundus up and drew the cervix down in place. After, however, getting the os, as I supposed, in its normal position, and one favorable for inspection, I introduced Emmet's short bi-valve speculum, but was unable to detect by sight any *os or cervix uteri*—the vagina presented at its inner extremity the appearance of a smooth oval cul-de-sac, without a uterus, and the uterus was, in reality, entirely outside of the vagina. While replacing the uterus, before introducing the speculum, I had distinctly felt the cervix, but it could not now be seen. On a close inspection I detected at one point a minute dimple, about such as pressure of the point of a small probe on the palm of the hand, for a second or two, would make; there was, however, no opening at all. By the touch I could feel distinctly around this dimple, and on the outside of the vaginal walls a hard mass, which I took to be the uterus. I then, in the presence of Dr. F. E. Gordon, who was assisting me, made a puncture at the dimple with a bistoury, and had the satisfaction to see at once that I had hit the os. A few drops of fluid, resembling synovia, oozed out, and Simpson's sound was at once introduced without impediment to the fundus. I then made a crucial incision, which only involves a tegumentary covering to the os, not thicker than a piece of kid skin.

From the facts that she had been treated by caustics and had not menstruated for 14 months, the natural conclusion was that the closure was the result of the treatment—granulations had doubtless sprouted from the opposing surfaces and adhered. There seemed to be no contraction of the cervical canal, beyond the os externum. It was evident that there had been no menstruation for a long time, as not a drop of colored fluid escaped then, or for two months afterwards from the uterus.

I introduced immediately, a good sized sponge tent, two inches long, into the uterus and allowed it to remain till next morning, when it was removed—it produced no uneasiness and the os was well dilated. The sponge tents were introduced daily for a week, for the double purpose of preventing closure, and of *stimulating the organ and producing a hyperæmic, with the view of provoking the menstrual flow.*

Dec. 18th.—Sent home to-day much improved in general health; has been taking pills of strychnine, iron by hydrogen and quinine; appetite and digestion good. It is worthy of re-

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mark that *the anteversion has disappeared*—a result attributable to the hyperæmia of cervix produced by the sponge tents. Directed to continue the tonic pills and to return to Mobile in a month.

Jan. 19th.—Returned to Mobile yesterday at the appointed time, but in feeble condition. The weather during the journey home was exceedingly cold and inclement, causing a severe attack of pneumonia, from which she is just convalescing—although the cough has almost disappeared she is more feeble and reduced than when I first saw her.

On examination, the os uteri was found open, and the sound readily entered fully two and a half inches. The orifice being a little contracted, and feeling anxious to try more fully the stimulating effect of the sponge tents on the suppression, I again commenced their use. She has thus far had no sanguineous discharge and but slight leucorrhœa.

Jan. 25th.—The tents have now been continued for a week, although by the third day the os was sufficiently dilated to admit the finger. I did not therefore see any reason to anticipate further trouble from contraction of the outlet.

The general health, from the effects of pneumonia, protracted bad treatment of uterine affection, and the bad habits of morphine and "dipping" is far from being satisfactory. Her most troublesome symptom at present is dyspepsia, with its usual attendants in such cases. Advised the following tonic:

R—Bi carb. Soda.	ʒj.
Pulv. Cort. Cinchonæ.	ʒj.
Pulv. Zingifer.	ʒj.
Pulv. Rad. Gentian.	ʒi.
Alcohol, dilute.	℥ij.

Dose, a tablespoonful after each meal.

She left for the country to day, and it remains to be seen, what influence the treatment will have upon the reestablishment of the general health and the menstrual flow.

About one month after her departure I had the gratification to receive a very satisfactory letter from her husband, announcing her entire recovery.

Remarks.—This case is interesting in several particulars. 1st, it is remarkable that a woman who had borne a child, should present the anomaly of a *uterus with its cervix and os outside of the vaginal cavity*. The vagina instead of being reflected, as usual, from the sides of the cervix, passed smoothly across the *os tincæ*, leaving an opening at the os, which was entirely closed by the caustic treatment, and thus leaving no appearance of the uterus in the vagina except the almost imperceptable dimple which I have discribed. 2d. It shows the impropriety

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of using caustics, without guarding against the closure of the os. The Practitioner should bear in mind the fact that healthy granulations, when brought in apposition, unite as readily as incised wounds. 3d. It would be interesting to know positively what share the sponge tents had in reestablishing the menstrual flow. She had exhausted tonics and all kinds of constitutional treatment, and yet for 14 months had no menstruation, and the health was very bad. This fact, together with the one, that the *anteversion*, a few days after the commencement of the use of the tents, *disappeared, not to return*. The conclusion I think legitimate, that both the rectification of the position of the uterus and the menstrual flow are attributable to the hyperæmia induced by the tents. The consequent engorgement of the neck would naturally have the effect of keeping it in the most *pendent* position, while the revulson would relieve the engorgement of the fundus, produced by malposition.

Case 2.—Mrs. B. S. had been subject to uterine hæmorrhages for four or five years—first at the menstrual periods, but for the last year or two they have paid no respect to time. Her age is forty; has several grown children; been a widow for ten years.

Consulted me on the 10th December, 1866, giving the above history; was anæmic, feeble, dyspeptic, nervous,; suffered no pain except some back-ache, and had but little leucorrhœa. I put her on the precipitated carbonate of iron and claret, telling her that it would be necessary, as soon as the hæmorrhage permitted, to make a proper examination with the speculum. No opportunity occurred until the 15th, when the examination was made. There was no malposition of the uterus, except some degree of prolapse from relaxation. The os was about three-quarters of an inch long; the lips were firmly pressed together along the middle part with an opening at each corner. A sound was easily introduced and carried to the fundus. Regarding the shape of the os an individual peculiarity, and supposing the cause of trouble to be a polypus or fibroid within, I determined to dilate the os fully with sponge, and explore the cavity of the uterus with the finger.

I commenced at once the use of tents, and continued them for about twelve to fifteen hours every day for a week, increasing daily the size. They gave no pain, and what is remarkable, provoked no hæmorrhage. On the 4th day the tent, having no string attached, slipped from the forceps and disappeared in the cavity of the uterus. Being very stiff and hard, it immediately caused severe uterine pains—these, however, subsided in about twenty minutes, I presume, from the softening of the sponge; and the sponge was found loose in the vagina next morning.

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It is remarkable that even this irritation did not produce any hæmorrhage.

After useing the tents for a week, and dilating the canal, as I supposed, sufficiently, she was fully chloroformed, and my right hand, well oiled, was introduced into the vagina. While the left hand, on the the outside pressed firmly on the fundus, the index finger was with little force introduced up to the fundus; the most thorough exploration could detect nothing within the uterine cavity; as the finger, however, entered the os, there was a manifest fullness and hardness on the anterior and posterior surfaces of the canal, extending from the external os upwards, for at least three-fourths of an inch. These protuberances gave to the finger the sensation of a fibroid formation. The os, though dilated sufficiently to allow the finger to enter without much force, and giving no resistance in its transverse diameter, *pressed the finger tightly in the antero posterior diameter.*

The protuberances which I have described, must I think be regarded as *fibroid* developments in each lip, and as the only cause for the long continued hæmorrhages. There was no other discoverable disease.

Remarks.—Now it will be remembered, that Dr. J. Marion Sims gives cases where not only polypi, but small fibroids were removed by the pressure of sponge tents, and this case I regard as a good one, in illustration of their curative influence. It seems evident that the tents used a week before my exploration of the cavity and for a week afterwards not only provoked no hæmorrhage at the time, but prevented its subsequent occurrence since, now more than two months. Two menstrual periods have passed, at each of which the discharge came on naturally—continued very moderately until the fifth day, when it ceased. During the menstrual periods she was kept in bed, and between times has been taking exercise and improving steadily in health.

She has been taking the precipitated carbonate of iron, ten grains three times a day in a wine glass of claret wine; and given in this way, it has proved in my hands the most efficient of all the mortial preparations.

She has gained flesh and strength—appetite and digestion good—the complexion is improving, and there is every reason to believe that her health is in a fair way to be fully reëstablished. If any hæmorrhage recurs, I feel confident it will be relieved, as before, by the sponge tents.

Sponge tents.—It is a matter of great practical importance not only to discriminate properly the class of cases in which these tents are to be used, but the manner of manufacturing,

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them is also of no little importance. Where only a very small tent can be used, the *sea tangle* answers admirably, and is probably superior to the sponge or any other material yet known. The only objection to tents of this material is, that they are too small for dilatation beyond a very moderate degree—if several could be glued together so as to overcome this objection, probably they would fulfil all the indications. The usual mode of making the sponge tent is, after the sponge is cut of proper shape and size, to saturate it with mucilage of gum arabic, then run through its centre lengthwise a piece of strong, pointed wire; it is next firmly wrapped from end to end with a piece of twine, so as to compress it into the smallest possible space—after it is thoroughly dried the wire is taken out, and the twine removed. It is better to take the wire out before the sponge gets dry, as it is very difficult to remove after the dissication is complete. The next step is to trim the tent evenly down on the sides and sand-paper it smoothly—the tent is then ready for use, and may be introduced by putting a little lard or cerate on the point and passing it quickly in.

According to my experience, there are several decided objections to tents of this kind. 1st. They are generally wanting in the firmness necessary, and if there happens to be a little delay in their introduction, they absorb moisture, enlarge at the end and become difficult to manage. 2d. When the tent expands, from its porosity, it becomes entangled in the granulations or tissues with which it is in contact, produces irritation, and often lacerates the surface in extraction, causing more or less bleeding. 3d. Sponge is one of the most irritating substances (not caustic) that can be placed in contact with a denuded or tender surface. 4th. It soon becomes excessively putrid and offensive, and the more irritating from this quality.

To obviate the above objections I have added what I conceive to be a great improvment, viz: a covering of *gold beater's skin.*—After the tent is finished, as above described, take a piece of the skin, wide as the tent is long, and long enough, when rolled around it, to envelope the tent five or six times. The gold beater's skin is stretched on any flat surface; smeared over with common paste, and the tent rolled up in it. It is then laid aside, and after perfectly dry, several rows of perforations, with the point of a pen-knife, should be made through the skin, from end to end, of the tent, with a view to the easy entrance of moisture and its consequent expansion. If these perforations are not made, the moisture of the parts can only find entrance at the extremities (which are left uncovered) and the expansion would be slow and difficult.

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The advantages of tents made in this way are—

1st. They are smooth as a well made cigar, very firm, require no oiling, and are introduced with great facility.

2d. As they absorb moisture and expand, the gold beater's skin gradually unfolds, and maintains its relative position between the sponge and uterine surface, thus protecting the uterus against the peculiar irritation of the sponge.

3d. During their removal, the gold beater's skin protects the uterine surface against the entanglement which usually occurs between it and the common uncovered sponge tents and consequent abrasion.

It is always well after the tent is introduced, to retain it in situ by a tampon of cotton, wool or lint; and in order to supply an abundance of moisture for the expansion of the tent, the tampon should be well wet with water, or what is better, glycerine and water, which makes a good antiseptic.

At the risk of being tedious, I will add another item in the manufacture of these tents, which I deem not unimportant, viz., the use of flour paste made by a certain formula, instead of the mucilage of gum arabic.

The formula for the paste, was taken from a medical Journal, and I have had a gallipot of it setting on my table, and been using it for months past for all purposes. The principal advantage of it in the manufacture of sponge tents, I think, is the mineral ingredients which prevents that abominable putridity that characterizes sponge as commonly used.

White Paste which will Adhere to any Substance.—Take sugar of lead, ʒiii.; alum, ʒiii—both are dissolved in water. Take gum arabic, ʒv. and dissolve in water, ℈j. Mix in a dish 1 ¼ pound of wheat flour with the gum-water cold, till pasty in consistence. Put the dish on the fire and pour into it the mixture of alum and sugar of lead. Shake well, and take it off the fire when it shows signs of ebullition. Let the whole cool and the paste is made. If the paste is too thick, add to it some gum-water, till of proper consistence.—*Journal of Applied Chemistry.*

In conclusion, I will call attention to the immense advantages of sponge tents in the *exploration of the cavity of the uterus*, in cases where it is indispensable, and in the various manipulations where nothing can be effected without dilatation. An expedient which will enable us to introduce the finger fairly into the cavity of the uterus and explore it fully cannot be too highly extolled, as we can not, by any other means, in many cases, make a diagnosis, or take a step toward treatment of a malady, that must end fatally, unless arrested.—*Richmond Medical Journal.*

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TREATMENT OF MENORRHAGIA.

We have collected from some of the hospitals a few hints respecting the treatment of the different pathological conditions of which this symptom is so frequently an exponent, and these will probably be interesting as well as useful.

ST. BARTHOLOMEW'S HOSPITAL.—Dr. Greenhalgh remarks that by far the greater number of cases of menorrhagia are due to fibroid or fibrous out-growths or in growths from the uterus, which are mostly treated by a pill composed of one-twelfth of a grain of bichloride of mercury combined with quinine and belladonna, to which is frequently added small quantities of the aqueous extract of aloes, taken night and morning for some weeks; a mixture composed of diluted sulphuric acid, tincture of Indian hemp, mucilage, liquid extract of ergot, syrup, and infusion of quassia, three or four times a day, being ordered just prior to and during the catamenial flow. Between the "periods" a draught of iodide or bromide of potass, with the liquid extract of ergot, sal volatile, and infusion of quassia, is given twice a day. If the loss of blood have been very great, or the patient be anæmic, the tincture of sesquichloride of iron with the liquid extract of ergot, chloric ether, syrup, and infusion of quassia, twice or thrice a day, with the pills, are prescribed. Where the patient is more or less plethoric, which is rarely the case, the sulphate of magnesia and digitalis, either with dilute sulphuric acid or salines, and scarifications of leechings of the cervix uteri, are found most serviceable in cases of subinvolution of the uterus attended with menorrhagia due to imperfect recovery from labor or miscarriage, hyperlactation, or other affections leading to constitutional debility, especially in the strumous habit, the syrup of the iodide of iron, with or without ergot, and with the pill above referred to, are found very efficacious. A similar course is pursued, sometimes with, sometimes without, the pills, where the commencement of malignant disease is the exciting cause of this symptom.

In cases of Bright's disease and other affections interfering with the stasis of the blood, gallic or tanic acid, usually compined with henbane, prove valuable hæmostatics; some preparation of iron with arsenic being usually ordered between the "periods." Where polypi, portions of retained ovum, or fibrinous clots are detected, they are removed.

Dr. Greenhalgh particularly draws attention to the frequency of menorrhagia as the result of collections of fecal matter in the large intestines and rectum, and of hepatic derangements occasioning mechanical irritation and congestions of the hæmorrhoidal vessels and uterus. For calculi, in addition to the pills,

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he prescribes repeated doses of the compound decoction of aloes with tincture of nux vomica.

In all cases he recommends quiet of mind and body; rest in the recumbent posture; nutritious and unstimulating diet; cold acid drinks; tepid or cold water vaginal injections; great moderation or total abstinence from sexual excitement.

He now and then has recourse to the following means: Matico-cotton plugs or pessaries; astringent vaginal injections; sponge tents; iodide of lead and atropine pessaries; iodized cotton; Hodge's and other pessaries in cases of misplacements of the uterus, &c.

Dr. Greenhalgh adds that *cæteris paribus*, menorrhagia is more prevalent among women of lax fibre, more especially if they have had many children or abortions in rapid succession; in those subject to acne, pruritus or eczema, and about the climacteric; in those of intemperate habits of various kinds, &c. He considers it is by no means always easy to determine whether the case is one of menorrhagia or threatened abortion.

University College Hospital.—In all cases Dr. Hewitt attaches much importance to rest during the "period." Daily use of the vaginal douches of cold water is valuable means of diminishing the congestion and restoring the lost tonicity of the uterus. The tincture of iron, in doses of from fifteen to twenty minims three times a day, combined with a few drops of glycerine, is very frequently given, and found efficacious where the system is debilitated from repeated losses of blood. In many cases Dr. Hewitt administers a few doses of ergot in powder (half a drachm three times a day).

The point to which the greatest attention is directed is the procuring an exact diagnosis of the state of the uterus. Obstinate menorrhagia is often, Dr. Hewitt says, found to be due to some physical alteration of the uterus, overlooked and consequently not treated. Of the latter class of cases, retroflection of the uterus is a most marked instance.

Great Northern Hospital.—For the last few years Dr. Murray has treated cases of menorrhagia—not dependent upon growth, displacements, or other causes requiring special and manipulative interference—by the combined use of gallic and sulphuric acids principally, with as much rest as can be obtained. The disease has generally shown itself in one of the three following forms: 1. Where at each period there has been a more decided loss than natural. 2. Where, from excessive debility, a bloody discharge has continued from month to month. 3. Where, after childbearing, a large uterus with a patulous os is continually pouring out blood, and every now and then doing so in gushes accompanied by clots. In all these degrees of this troublesome and weakening complaint, Dr. Murry is in the habit of

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prescribing from five to ten grains of gallic acid with from fifteen to twenty-five minims of dilute sulphuric acid, twice or thrice daily, for a period sometimes extending over two months. Occasionally he has found the use of mustard applied over the sacrum every other night, or even a blister on the same spot, useful as a help in the third form of this hemorrhage. He has also advised the application of cold water to the lower part of the spine in cases of continued discharge (not leucorrhœal) between the periods.

Dr. Murray has not found the use of iron at all satisfactory; but he has administered it with good effect in some cases after a continuance of the acid mixture, and all arrest of hemorrhage for some time. The use of vaginal injections has not been recommend by Dr. Murray; but in many cases cold water enemata have been extremely useful at those moments when the gushes of blood with clots take place, a gentle non-irritating purgative being also given.

Charing-Cross Hospital.—Dr. Parson recommends rest as much as possible in *all* cases of menorrhagia; and the avoidance of household duties, at least for a few days, during the severity of the symptoms.

The astringent mixture in general use amongst the out-patients consists of tannic acid (from five to ten grains,) dilute sulphuric acid (from twenty to thirty minims,) and the liquid extract of ergot of the British Pharmacopœia (from five to ten minims,) every four or five hours for the first few days. If there be much pain attending the menorrhagia, Dr. Parson usually orders from five to ten minims of the tincture of Indian hemp to each dose. Dr. Parson has never seen any ill result following the use of Indian hemp, but he has generally employed it in the former combination, or with other astringents.

As a general rule, all the preparations of iron are avoided in menorrhagia, even though there be anæmia and pallor, since iron invariably increases the vascularity of the pelvic organs; and he employs the preparations of iron only when two or three menstrual periods have passed normally.

Aloes also is avoided, in most of its preparations, in *all* cases of menorrhagia, since it is apt to increase the irritability and vascularity of the pelvic viscera.

Menorrhagia associated with metritis is treated by astringents for the first few days. The bowels are regulated by a saline aperient—the bitartrate of potash in drachm doses, with quinine in half to one grain doses, taken every morning. After the period has ceased the usual treatment of metritis is employed.

Menorrhagia associated with a granular state of the mucous membrane of the cervix uteri is treated by astringents and ton-

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tis generally. A local astringent consisting of the solution of chloride of zinc (Burnett's), from twenty to thirty minims to every pint of water, is also used by the patient two or three times a day as a douche. Dr Parson finds that a stronger astringent than this for local application is seldom, if ever, required in these cases.

The cases of menorrhagia associated with polypi are not treated with any benefit as out-patients, but are admitted as in-patients of the hospital.

Cases of menorrhagia resulting from the presence of fibroid tumors of the uterus are treated usually as in-patients also.

Menorrhagia arising from cancer of the uterus, usually resists all treatment. From twenty to thirty minims of solution of chloride of zinc to a pint of water often is more useful than any other douche in dimishing the fetor, and to some extent the amount of the discharges.

In the following cases of menorrhagia, where there are no local lesions of the generative organs, a brief summary of the treatment is as follows:—

From debility, it is treated by the astringents during the period; after the period has ceased tonics are employed, excluding iron and aloes until the tendency to excessive menstruation has ceased, then the preparations of iron with nux vomica or strychnine become valuable.

When depending on congestion of the portal system, it is relieved by a daily aperient of bitartrate of potash with quinine, and with or without five or ten grains of jalap in each dose, taken every morning, and avoidance of alcoholic stimulants.

Associated with mitral or aortic obstruction, menorrhagia is most difficult to relieve, and is treated on general principles—of diminishing the congestion of the pelvic organs as much as possible, and giving tone to the distended capillaries and veins.

Menorrhagia with emphysema or chronic bronchitis is also exceedingly difficult to relieve, and when relieved for a time, often returns.

Resulting from kidney disease and albuminuria, it is treated by warm clothing; aperients daily of compound jalap powder with quinine, given in the mornings, and the sesquichloride of iron with nux vomica two or three times a day, generally with marked improvment.

When associated with spongy gums and a scorbutic state, it is treated by the citrate and chlorate of potash; the patient being directed to avoid all salted meat; to take the juice of half a lemon every day; occasionally tannic acid is given in addition. —*London Lancet.*

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SPONTANEOUS GENERATION.

The question of spontaneous generation is one which has exercised the thoughts and pens of observers of nature from very early times. While one class of thinkers believed it possible for common inorganic matter, under certain circumstances of heat, moisture, &c., spontaneously to assume living organic forms of plants or animals, others clung tenaciously to the dictum, *omnia ab ovo*, and insisted that a preëxisting living germ was essential to all living being. Aristotle believed that whenever a moist substance became dry, or a dry substance moist, animals were produced, and we find some of the poets accounting for the renovation of animal life after the deluge of Deucalion, by the joint action of heat and moisture upon the prolific earth.

It is undeniable that our experience among the more fully developed animals and plants, would lead us to maintain the doctrine enunciated in the old Latin maxim we have just quoted, but when we come to those low organisms which hover upon the borders of vitality, we meet with difficulties not easily overcome. It is useless to speculate upon the ridiculous blunder of Mr. Crosse, of which so much use was made by the ingenious author of the Vestiges of Creation. Those of our readers who have perused that specious and shallow book, will remember that Mr. Crosse imagined that he had made acari by passing a current of electricity through a solution of silicate of potash containing a stone. Examination, however, showed that the electrical spider was simply the common *Acarus domesticus*, a common pest of all dusty localities.

There are much lower forms than this, which are continually generated in infusions or solutions of vegetable or animal matter exposed to the air, over the true origin of which a discussion is still going on. Among the most common of these is our ordinary mould, which is in truth as well defined a vegetable organism as the mushroom. The yeast plant is another of these microscopic plants, which invariably makes its appearance when sugar is passing into alcohol. After the alcohol has been formed, and vinegar is in process of formation, another mycoderm, the vinegar plant or mother of vinegar, makes its appearance. In the infusions already alluded to multitudes of vegetable and animal organisms are speedily formed.

It is to such rapid developments of life as these that the advocates of the doctrine of spontaneous generation are in the habit of appealing. They maintain that when all sources of error are avoided, these minute creatures still appear, while their opponents insist that something has been overlooked, and

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that these forms are regularly hatched from germs floating about in the atmosphere in the shape of impalpable dust. Several experiments had already shown that the existence of such spores was highly probable, but it was reserved for M. Pasteur, a chemist of note, to make the most conclusive researches upon this subject which have yet been undertaken.

The first point was to prove the existence of these germs. To accomplish this, M. Pasteur drew a volume of air through a glass tube containing a plug of gun-cotton, which intercepted the particles of dust. Transferred to ether, that solvent completely dissolved the gun-cotton, and left the dust unattacked. This soon settled to the bottom, when it was removed and subjected to microscopic examination. It was found to consist of various abraded fragments of clothing, fuel, &c., and also of minute organized corpuscles, apparently spores of fungi and eggs of animalculæ. To prove their true character an experiment was undertaken. A mixture of a solution of sugar with yeast was boiled in a glass flask communicating with the air by means of a tube of platinum. In this way the air was driven out of the flask, and before it could return, the platinum tube was heated to redness. Thus all the germs were destroyed, and the air that entered was entirely free from living organisms. The flask was then hermetically sealed by fusing the glass neck. It was found that in this condition the solution might be indefinitely kept without any development of vegetable or animal life.

If into such a flask a little of this dust already mentioned is introduced, and the flask be then hermetically sealed, the ordinary living forms are soon found. Attempts were made to collect air for these experiments over mercury, but they always failed, because this metal could not be freed from atmospheric dust containing germs.

Researches into the distribution of these germs showed that they were more abundant upon plains than upon high mountains. In all cases, air free from these germs can not promote fermentation.

These experiments were very ingeniously varied and repeated a great number of times, so as completely to justify the conclusion of M. Pasteur, that the theory respecting the spontaneous formation of the lowest type of life is deprived of one of its essential foundations.

Donnè however, has recently (August, 1866,) deserted the ranks of Pasteur and gone over to the advocates of spontaneous generation. He examined rotten eggs, and found that they contained no organisms. He made a hole in each with a

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red hot needle, and let part of the contents flow out, and then put the egg into a pan of boiling water. Ten days afterward the drops of water taken from the surface contained no trace of living being, but the interior of the eggs were full of them. Donnè asks whence the germs could have come through the boiling water.

Pasteur replies that the temperature of ebullition does not necessarily annihilate the latent life of a germ, and cites instances of seeds preserving vitality after four hours boiling. Donnè, in rejoinder, varies the experiment by letting out a third of the contents of the egg as before, and instantly admitting boiling water, after which he seals the opening with wax, completely closing all communication with the air.

An English observer, Dr. Child, has repeated Pasteur's experiments, but in spite of every "exaggerated" precaution finds organisms in eight out of thirteen experiments. He accounts for this discrepancy by supposing that the microscopic power used by Pasteur (350 diameter,) was not high enough. He says that it requires a power 1500 or 1700 diameters for the satisfactory investigation of these minute objects.

Thus the matter stands at present. The analogies of generation in the higher animals and plants are opposed to the theory of spontaneous generation, but no *a priori* reasoning can settle the question. The careful observations of facts alone can decide it.

ACUPRESSURE.

The following are the seven different modes of applying acupressure, as detailed in the work of Drs. Pirrie and Keith, entitled "Acupressure: an excellent Method of Arresting Surgical Hemorrhage and of Accelerating the Healing of Wounds:"

The first method consists in introducing a long needle or glass-headed pin, with bayonet point, through the flap from its cutaneous surface close to the opening of the bleeding vessel; carrying its point across the track of the artery, and then pushing its point into the tissues of the flap, it is made again to emerge upon the cutaneous aspect of the flap. It is stated that in many conditions this is an admirable method of suppressing hemorrhage, especially of the spermatic arteries in the cases of excision of the testicle, radial and ulnar arteries in cases of hemorrhage from deep wounds of the hand, &c.

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The second method.—Here a short needle, threaded with iron wire, to admit of its being withdrawn, is introduced upon the cut surface of the flap. First taking up the tissues on one side of its course, it is made to emerge close to the channel of the bleeding vessel, and bridging over its track, is pushed onwards more or less deeply among the tissues beyond, so as to compress its tube and stanch the bleeding by the strain of the tissues among which either extremity of the needle has been buried. In many minor operations Dr. Pirrie has practiced this method, and always with satisfactory results.

The third method is effected by transfixing the tissues lying around an arterial tube, by means of a needle introduced from the cut surface. A loop of wire is now passed over the exposed point of the needle, and the two ends of the wire together tightened round its shank till the tissues containing the vessel, and now included between the needle and the wire, are sufficiently compressed to check all flow of blood from the open mouth.

The fourth method is precisely the same as the third, except that a steel pin with a glass head is substituted for the needle threaded with twisted wire.

The fifth method was originally employed by Sir J. Y. Simpson, in a case operated on by Dr. P. D. Handyside, but independently introduced by Dr. Knowles, a former house surgeon in the Aberdeen Hospital (and hence called, in Aberdeen, the Aberdeen method). This is effected by introducing a needle or pin through a modicum of tissues on one side of the artery to be compressed, and then having rotated its shank or head a quarter or half circle horizontally with the surface of the wound, its point is pushed onwards among the tissues, corresponding to the new axis of the needle, so as to maintain the occlusion of the artery by the degree of twisting of texture thus produced.

The sixth method, originated by Dr. Keith, consists in passing a pin through the tissues beside the open mouth of an artery; the duplicate of iron wire is then looped over the needle-point; the ends of the wire, instead of being bent together round the shank, are separated from each other, and made to include the bleeding vessel and the textures in which it lies, so that when the ends of the wire are crossed behind the needle-shank and tightened, the included parts are compressed on both sides of the needle.

The seventh method consists in employing a pin to compress the bleeding artery against an osseous surface in contact or in close proximity to which it lies.

Of all methods of acupressure, Dr. Pirrie says the third and the fourth are, no doubt, the most secure. The principle on

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which the hemorrhage is suppressed in both methods is precisely the same. For securing a vessel on a perpendicular wound, the sixth will sometimes be found a convenient method in circumstances where the performance of the third or fourth would be attended with difficulty. It has occurred to Dr. Keith to suggest that in persistent hemorrhage from any vein on the face of a stump, arrest may be safely accomplished by having recourse to either the first method or the fifth, as locality may indicate. A few hours' pressure would insure permanent occlusion, and then, without disturbance, the pin can be withdrawn.

THE MEDICAL REPORTER.

ST. LOUIS, SEPTEMBER 1, 1867.

The City Hospital of St. Louis.—Through the polite invitation of the President of the Board of Health, Dr. J. T. Hodgen, and the attention of the Resident Physician of the Hospital, Dr. E. A. Clarke, we had the opportunity and pleasure recently of seeing the great changes that have been wrought in that Institution during the last six months. Comparisons are odious it is true, but we can not but call to mind the condition of the building during a few past years and the state in which it now is. From whatever cause—we do not pretend to inquire, no excuse is allowable—this noble charity of our city had been allowed to decline; money was not wanting, but system and attention and industry. Patients were received and indifferently provided for, and the sanitary condition of the building was wretched and intolerable. We are happy to state that now everything betokens a new order; the building has been thoroughly renovated; the arrangement of the patients is more systematic; and the air of comfort which reigns throughout is a source of satisfaction to every well-wisher of this institution. We were particularly attracted by the wards for the colored patients; heretofore nothing was too indifferent for them; now

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they receive the attention and care bestowed upon the white Every part of the building has been subjected to the same thorough improvement. From the culinary, laundry and washing departments, all provided with the latest appliances to facilitate labor, up to the medical and surgical, order reigns supreme. We see in this Institution, which may be enlarged from time to time to meet the wants of our rapidly growing city, all that is necessary for hospital purposes. It will compare very favorably with those of the Eastern cities; private hospitals may arise, and very properly for certain purposes under the charge of eminent men of the profession, but we want nothing better now, or for years to come, than the City Hospital. Let the city confide in the Board of Health and we shall always have, as at first designed, a public charity which will be at once an honor and a blessing. At present Dr. E. A. Clarke holds the position of Resident Physician; Drs. Thos. Hamill, F. J. A. Gemans, J. A. Posey, E. Crepin, F. R. Steuver, Assistants.

Among the notable changes which have taken place in the Health Department, we can not overlook the City Dispensary, under charge of Dr. R. H. O'Brien, assisted by Dr. R. A. Quarles, and the Health Office, Dr. W. W. Grissom, Health Officer, with its various subdivisions, which is the origo et fons of all the sanitary operations of the city. This department is now in a condition to properly conform with the grand design of the new health ordinance. We are rejoiced to see that at last our hygienic regulations are systematized, and we can very soon equal the health organizations of the oldest cities. Certainly we have already felt the beneficial influence this summer of the ordinances laid down for the prevention of disease; whatever contrary opinions may obtain, we have been saved from cholera and much of kindred disease by the wise action of the Board of Health.

On another occasion we shall speak of the Quarantine and Small-Pox Hospital.

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Missouri Dental College.—We would call attention to the Second Annual Announcement of this Institution in our Advertising Department. This is the only regularly organized Dental College in St. Louis. The so-called St. Louis Dental College applied to the Cincinnati Dental Association (the highest authority in the United States on Dental Ethics) for recognition and was peremptorily refused, as see the following preamble and resolutions, which were unanimously adopted.

Dr. Kennicott, from the Committee on Credentials of the American Dental Association, at its last meeting in Cincinnati, Ohio, made the following report on the credentials of a delegate from the so-called St. Louis Dental College:

Your committee would respectfully report that they have had the matter referred to them carefully and earnestly under advisement, and weighing carefully all evidence, pro and con, they are forced to the conclusion that the St. Louis Dental College has no existence except under a technicality of a loose and dangerous statute of the State of Missouri; that it has never attempted to fulfill the spirit of even this bad law, by instituting lectures, clinics, or any other mode of teaching dental sciences; that the degrees and diplomas which this so called college has conferred are null and void in law, and ought to be ignored and repudiated by all regularly constituted colleges and associations; that the scheme of its birth was conceived with very discreditable motives, and that its culminating act of sending delegates to this Association merits our strongest condemnation and rebuke.

And, finally, your committee believe that the recognition of this so-called dental college by this Association, by accepting its delegates, would be setting a dangerous and mischievous precedent that would lower the standard of dental education, and put quacks and mountebanks in the highest places of trust and honor in the profession.

All of which your committee most respectfully beg leave to submit for the consideration of this Association.

J. A. KENNICOTT,
A. W. FRENCH,
J. RICHARDSON,
B. T. SPELLMAN,
R. W. VARNEY,
} *Committee.*

On motion, the report was accepted and unanimously adopted.

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Dr. Kennicott offered the following resolution:

WHEREAS, It is a cherished object of this Association to elevate the standard of dental education, and wipe out from the escutcheons of our noble profession the stains of quackery; therefore,

Resolved, That we will not countenance any act of any dental college that shortens the road to the honorable title of Doctor of Dental Surgery, by lowering the standard of professional excellence.

It was adopted unanimously.

Lindsay & Blakiston, Philadelphia.—We would call especial attention to the advertisement of New Books on page 32, Advertising Department, of the above firm. They comprise all the latest works on the various subjects now published.

Acknowledgment.— We are under special obligation to the Publisher of the *American Journal of Medical Sciences* for copies of plates illustrating Dr. J. C. Nott's articles in the present number of the REPORTER, for which we return our thanks.

Correction.—Our readers will please notice the following corrections in Dr. J. H. Salisbury's article in number 11, August 1, and number 12, August 15:

Page 322, in 20th line from top, after risen, insert *equally*.

Page 322, in 7th line from bottom, omit *and* after sperm.

Page 323, in 20th line from top, read *putrefactive* in place of putrefaction.

Page 329, in 18th line from top, read *here* for now.

Page 330, in 4th line from top, read *irritants* for contents.

Page 334, in 15th line from bottom, read *soluble* for insoluble.

Page 363, in 10th line from top, read *fibrin* for fibrini, and *excreting* for exciting.

Page 363, in 13th line from top, insert *and* after food.

Page 365, in 12th line from top, read *fibrous* for fibrinous.

Page 365, in 21st line from top, insert *and blood* after chyle.

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THE SAINT LOUIS

MEDICAL REPORTER,

A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,

EDITED BY

J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, SEPTEMBER 15, 1867. No. 14.

A CASE OF ŒSOPHAGISM.

BY. J. S. B. ALLEYNE, M. D.

[Communicated for the St. Louis Medical Reporter.]

It is now fully eight years since, that I attended a young girl, then eight years old, for an ordinary attack of bilious fever, with a slight complication of bronchitis. The disease passed away readily enough, though a complete restoration to health seemed deferred by a general prostration of system, approaching anæmia, for which was used some length of time the ferruginous tonics. The only complaint made in the course of recovery was a seated pain, about midway the œsophagus, which annoyed without producing real suffering. As time progressed, however, an occasional vomiting took place, merely of the food or drink, unaccompanied with nausea; in fact, a regurgitation. This increased in frequency, till at last nothing swallowed could be retained. Evidently the food, solid or liquid, did not enter the stomach; the ingesta could be felt descending to a certain point, there to be arrested and immediately returned. There was the appetite at times inordinate; everything tasted naturally. Ultimately, as the patient recovered sufficiently to sit at table, she would eat, though certain of the immediate result, to satisfy if possible the cravings of hunger, but before the food, solid or liquid, could have time to reach the stomach,

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she arose and hurried out, to spit it up. Of course this became a source of exceeding annoyance to the patient herself, and to the family. It isolated her entirely from friends, and as she grew up withdrew her more and more from society. At the commencement, when this attack of spasm of the œsophagus developed itself, there was extreme emaciation and prostration; the patient was tormented with constant hunger and thirst, and at times her life was despaired of. Still she held along for weeks and months, until at last there seemed a positive gain. Strength increased until she could sit up, finally move about, though after a long period; then she could approach the table—finally participate in the occupations of the family; she gained flesh, and seemed well enough, though always a delicate, undeveloped girl. She became accustomed to the affliction, despaired of a cure, and submitted with resignation to her condition. This regurgitation, or eructation of ingesta, lasted at least eight years. During the last year she became afflicted with an obstinate conjunctivitis, from which she is now gradually recovering. Her appearance has always been anæmic, though latterly not extremely so; her strength of late considerable, so that she could endure to some extent the exercise of young girls. Menstruation was established at the proper time; the system, in fact, was restored to as complete health as compatible with the amount of food entering the stomach. Within the last six months she has entirely recovered from this distressing complaint; it disappeared rapidly, in the course of one day, and has never since returned. Of course, during such a long period of distress, every remedy was tried that the experience of various physicians could suggest—not only medicine, but surgery failed to give relief. In later years, all efforts to alleviate were suspended as useless, so that finally the disease wore out of itself.

It is not to be supposed that the stricture of the œsophagus was in this case complete; life was barely sustained in the beginning; the first mark of increase of strength evidenced an increase of nourishment to the system; but apparently all food,

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solid as well as liquid, was thrown up; then again, at the last, while never satisfied, the patient's craving for food was not so strong as at first; a certain feeling of satisfaction seemed to be derived from swallowing, though immediately afterward the food was rejected. But certainly the case was remarkable for the length of time in which the constriction existed; instances are mentioned of a long persistence of the disease, but always with certain periods of intermission, when food could be swallowed; here apparently there was no intermission during the extent of eight years, and then immediate and complete disappearance. Could the disease have been the result of inflammation? The rather sudden appearance would have contradicted this view. The only symptom of inflammation was the pain at first, but this might have arisen from the unnatural condition of the œsophagus; other symptoms were wanting. There seemed to be no mechanical cause externally; there were no enlarged lymphatic glands; there was no disease of blood vessels. The anæmia from previous disease, the sudden advent, the sudden disappearance, the absence of inflammatory symptoms, the predominance of the nervous temperament, all seem to demonstrate a spasm of the œsophagus. The recovery from the extreme exhaustion produced by starvation at the earliest period of the disease, and the duration of the whole attack, render the case not only interesting, but remarkable.

Weakened Vision from Tobacco Smoking.—In some cases the impairment of vision which goes by the name of amblyopia precedes its entire loss, from palsy of the optic nerve. Objects are perceived but imperfectly; they appear more or less obscured by cloud or haziness; the letters of a book run into each other and become confused; the eye is soon tired, and waters or becomes bloodshot if exertion is continued. M. Viardin has reported three cases of this disease caused by smoking. In the treatment of these cases the quantity of tobacco smoked was reduced, under the direction of M. Viardin, and the sight was restored in the course of a few weeks. He must be a very slave to the use of the weed who, having once recovered from its poisoning effects, would persist in its habits.

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ON THE STRUGGLE FOR EXISTENCE AMONGST PLANTS.

By J. D. Hooker, M. D., F. R. S.

The quaint dictum, "Plants do not grow where they like best, but where other plants will let them," which is credited to the late eminent horticulturalist, Dean Herbert, of Manchester, expresses a truth not yet half appreciated by botanists. It is a protest against the prevalent belief, that circumstances of climate and soil are the omnipotent regulators of the distribution of vegetables, and that all other considerations are comparatively powerless. The dean's crude axiom has lately found a philosophical exposition and expression in Mr. Darwin's more celebrated doctrine of the "Struggle for life, and preservation thereby of the favored races," and if to it we add that great naturalist's more fruitful discovery, of the necessity for insect and other foreign agencies in ensuring fertility, and hence perpetuating the species, we shall find that the powers of climate and soil are reduced to comparatively very narrow limits. Before proceeding to show what are the causes that do materially limit the distribution of species, it may be well to inquire how far the hard-pressed soil and climate theory really helps us to a practical understanding of one or two great questions that fall under our daily observation; of these the following are the most prominent.

That very similar soils and climates, in different geographical areas, are not inhabited, naturally, either by like species, or like genera; that very different soils and climates will produce almost equally abundant crops of the same cultivated plants; and that, in the same soil and climate, many hundreds, nay, thousands of species, from other very different soils and climates, may be grown and propagated for an indefinite number of successive generations.

Of the first of these statements, the examples embrace some of the best known facts in geographical botany; as, for example' that the Flora of Europe differs wholly from that of temperate North America, South Africa, Australia, and temperate South America, and all these from one another. And that neither soil nor climate is the cause of this difference, is illustrated by the fact that thousands of acres in each of these countries are covered, year after year, by crops of the same plant, introduced from one to the other; and by annually increasing numbers of trees, shrubs and herbs, that have either run wild or are successfully cultivated in each and all of them. The third proposition follows from the two others, and of this the best example is afforded by a good garden, wherein, on the same soil and under identical conditions, we grow, side by side, plants from

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very various soils and climates, and ripen their seeds, too, provided only that their fertilization is insured. The Cape geraniums, London pride and Lysimachia nummularia in our London areas, the pendent American cacti in the cottage windows of Southwark and Lambeth, are even more striking examples of the comparative indifference of many plants to good or bad climate and soil; and what can be more unlike their natural conditions than those to which ferns are exposed in those invaluable contrivances, Ward's cases, in the heart of the city? True, the conditions suit them well, and, with respect to humidity and equalibility of temperature, are natural to them; but neither is the absolute temperature nor the constitution nor freshness of the air the same as of the places the ferns are brought from; nor is any systematic attempt made to suit the soil to the species cultivated, for, as Mr. Ward himself well shows, the arctic saxifrage, the English rose, the tropical palm, and desert cactus, live side by side in the same box, and under precisely similar circumstances, and, as it were, in defiance of their natal conditions.

Let it not be supposed that we at all underrate such power as soil and climate really possess. In some cases, as those of chalk, sand, bog, and saline and water plants, soil is very potent; but the number of plants actually dependent on these, or other peculiarities of the soil, is much more limited than is supposed. Of *bona-fide* water-plants, there are few amongst phænogams. Sand plants, as a rule, grow equally well on stiffer soils, but are there turned out by more sturdy competitors; and with regard to the calcareous soils, it is their warmth and dryness that fits them, to so great an extent, for many plants that are almost confined to them, or are absolutely peculiar to them. So, too, with regard to temperature, there are limits, as regards heat, cold and humidity, that species will not overstep and live; but, on the other hand, so much has been done by selection in procuring hardy races of tender plants, and so much may be done by regulating the distribution of earth-temperature, &c, that we already grow tropical plants in the open air during a portion of the year, and eventually may do so for longer periods.

Amongst the most striking examples of apparent indifference to natural conditions of soil and climate, I would especially adduce two. One is the *Salicornia Arabica*, a plant never found in its natural state except in most saline situations, but which has flourished for years in the Succulent House at Kew, in a pot full of common soil, to which no salt has ever been added; the other is the tea plant, which luxuriates in the hot humid valleys of Assam, where the thermometer ranges between 70° and 85°, and the atmosphere is so perennially humid that watches are said to be destroyed after a few months'

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wear; and it is no less at home in Northwestern India, where the summers are as hot and cloudless as any in the world, and the winters very cold. I may add, that the tea plant has survived the intense cold of this last January, at Kew, on the same wall where many hardy and half-hardy plants have been killed.

It is, further, a great mistake to suppose that the native vegetation of a country suffers little and very exceptionally by abnormal seasons. The most conspicuous instance of the contrary that ever fell under my observation, was the destruction of the gigantic gum tree (*Eucalyptus*) forests, in the central districts of Tasmania, which occurred, if I remember right, about the year 1837. In 1840 I rode over many square miles of country, through stupendous forests, in which every tree was, to all appearance, absolutely lifeless. The district was totally uninhabited, consisting of low mountain ranges, 2,000 feet above the sea, separating marshy tracts interspersed with broad freshwater lakes. The trees, much like the great gaunt elms of Kensington Gardens during winter, but much larger, were in countless multitudes, 80 to 180 feet high, close-set, and 10 to 20 feet in girth; their weird and ghostly aspect being heightened by the fact of most being charred for a considerable distance up the trunk, the effects of the native practice of firing the grass in summer during kangaroo hunting season; and by the bark above, hanging from their trunks in streaming shreds, that waved dismally in the wind; for the species was the stringy-bark gum that sheds its bark after this fashion. And not only had the gum-trees suffered, the hardier *Leptospernum* (tea-tree bush), and many others, were killed, some to the ground, and some altogether; so that, though my journey was in spring, and the weather was delightful, the aspect of the vegetation was desolate in the extreme.

In such climates as our own similar devastations are unknown, and, though we know that our island was once covered with other timber than now clothes it, we have every reason to suppose that the change was slow, and the effect either of a gradually altered climate, or of the immigration of trees equally well or better suited to the conditions of the soil and climate, but which had not previously had the opportunity of contesting the ground with the ruling monarchs of the forest.

Making every allowance, then, for the influence of soil and climate in checking the multiplication of individuals, we have still two classes of facts to account for; the one, that plants which succeed so well, when cultivated, that we are assured both soil and climate are favorable to their propagation, nevertheless become immediately or soon extinct when the cultivator's care is withdrawn; the other, that plants of one country, when introduced into another, even with a very different soil and cli-

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mate, will overrun it, destroy the native vegetation, and prove themselves better suited to local circumstances than the aboriginal plants of the country. In the first case the reasons are very various, all of them relating to the conditions of the plant's existence. Of these the two most potent are, the absence of fertilizing agents and the destruction of seeds and seedling plants. In the present state of our knowledge it is impossible to say which of these is most fatal in its effect. In the case of our annual plants, or our cereals, which never run wild, it is the latter certainly, for they seed freely enough; in the case of many perennials, shrubs and trees, it may be the former, as with the common elm and lime, which rarely or never seed in England, though the latter is so notably frequented by insects during its flowering season; whilst a third cause is to be found in their seedling plants being smothered by others, of which we have numerous examples in our common pasture grasses, which are, perhaps, the most prejudicial in this respect. A most conspicuous example of this is afforded by the common maple, of which the seedlings come up early in spring by thousands in the neighborhood of the parent tree, in lawns and plantations, but scarcely ever survive the smothering effects of the common summer grasses, as soon as these begin to shoot.

When I visited the cedar grove on Mount Lebanon, in the autumn of 1860, I found thousands of seedling plants, but every one of them dead; and so effectual is the annual slaughter of the yearlings in that grove, that, though the seeds are shed in millions, and innumerable seedlings annually spring up, there is not a plant in the grove less than about sixty years old. It may hence have been sixty years since a cedar there survived the first year of its existence; that is to say, has struggled through its infancy, and reached the age even of childhood!

On the other hand, when once the natural conditions of a country have been disturbed, the spread and multiplication of immigrants is so rapid that it shortly becomes impossible to discover the limits of the old, indigenous Flora. Take the English Flora, for example. If we contrast the cultivated counties with the uncultivated, the difference of their vegetation is so great that I have often been compelled to doubt whether many of the most familiar so-called wild flowers of the cultivated counties are indigenous at all; nay, more, I have been tempted to suspect that some of the more variable of them, as some species of *chenopodium* and famitory, may have originated since cultivation began. In the uncultivated counties the proportion of annual plants is exceedingly small, whereas, in the cultivated counties, annuals are very numerous; and the further we go from cultivation, roads and made ground the rarer they become, till at last, in the uninhabited islets of the west coast of Scot-

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land, and in its mountainous glens, annuals are extremely rare, and confined to the immediate vicinity of cottages. Let any one who doubts this contrast between the Floras of cultivated and uncultivated regions compare the annuals in such Floras as those of Suffolk or Essex, the North Riding or Cumberland, with those of the Isle of Wight and the Isle of Arran. And it is not only that annuals abound in the cultivated districts, but that so many are nearly confined to ground that is annually or frequently disturbed. The three commonest of all British plants, for example, are, perhaps, groundsel, shepherd's purse, and *Poa annua*. I do not remember ever having seen any of those plants established where the soil was undisturbed, or where, if undisturbed, they had not been obviously brought by man or the lower animals; and yet I have gathered one of these, the shepherd's purse, in various parts of Europe, in Syria, in the Himalayas, in Australia, New Zealand and the Falkland Islands. Were England to be depopulated, I believe that in a very few years these plants, and a large proportion of our common annual "wild flowers," would become exceedingly rare, or extinct, such as the Poppies, Fumatories, Trefoils, Fedias, various species of Speedwell, Anagallis, Cerastiums, Lithospermum, Polygonum, Mallow, Euphorbia, Thlaspi, Senebiera, Medicago, Anthemis, Centauria, Linaria, Lamium, &c., &c.

It is usually said of some of the above-named plants that they prefer cultivated ground, nitrogenous soil, and so forth; and this is no doubt true, but that they will flourish where no such advantages attend them, a very little observation shows; and that they do not continue to flourish elsewhere is due mainly to the fact that, being annuals, their room is taken as soon as they die, and the next year's seedling has no chance of success in the struggle with perennials.

For good instances of this rapid replacement of annuals by perennials, the new railroad embankments should be examined. Whence the plants come from which spring up like magic in the cuttings, many feet below the surface of the soil, is a complete mystery, and reminds us of the so called spontaneous generation of protozoa in newly-made infusions, or in distilled water. In the south of Scotland in 1840–50, and many parts of the north of England, the first plant that made its appearance was *Equisetum arvense*, which covered the new-formed banks for miles and miles with the most lovely green forest of miniature pines. In the following year comparatively few of these were to be seen, and coltsfoot, dandelions, and other biennials, especially Umbelliferæ, with a great number of annuals, presented themselves. For many successive years I had no opportunity of watching the struggle for life on these banks, but when I last

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saw them they were clothed with perennial grasses, docks, plantains, and other perennial rooted plants.

The destruction of native vegetations by introduced is a subject that has only lately attracted much attention, but it has already assumed an aspect that has startled the most careless observer. Some thirty years ago the fecundity of the horse and European cardoon in the Argentine provinces of South America, so graphically described by Sir Edmund Head, drew the attention of naturalists to the fact that animals and plants did not necessarily thrive best where found in an indigenous condition; and the spread of the common Dutch clover, *Trifolium repens*, in North America, where it follows the footsteps of man through the pathless forests, has long afforded an equally remarkable instance of vegetable colonization. Still more recently, in South Africa, Australia and Tasmania, the Scotch thistle, briar rose, Xanthium, plantains, docks, &c., have all become noxious weeds; and this leads me to the last and most curious point to which I shall allude in this article, viz.: that the same annuals and other weeds, that are held so well in check by the indigenous perennial plants of our country, when transplanted to others, show themselves superior to the perennial vegetation of the latter. Of this New Zealand furnishes the most conspicuous example—it was first visited scarcely more than 100 years ago, and it is not yet fifty since the missionaries first settled in it, and scarce thirty since it received its earliest colonists. The Islands contain about 1,000 species of flowering plants, amongst which no fewer than 180 European weeds have been recorded as intruding themselves, and having become thoroughly naturalized; and probably double that number will yet be found, as they have never been systematically collected; but the most curious part of the history is this, that whereas of indigenous New Zealand plants scarcely any are annual, no less than half the naturalized European ones are annual.

Of the effect of these introduced European plants in destroying the native vegetation, I have given examples in an article that appeared in the *Natural History Review* (January, 1864), from which I quote the following:

In Australia and New Zealand the noisy train of English emigration is not more surely doing its work tean the stealthy tide of English weeds, which are creeping up over the surface of the waste, cultivated and virgin soil in annually increasing numbers of genera, species and individuals. Apropos of this subject, a correspondent (W. T. Locke Travers, Esq., F. L. S.)—a most active New Zealand botanist—writing from Canterbury, says: "You would be surprised at the rapid spread of European and other foreign plants in this country. All along the sides of the main lines of road through the plains a *Polygonum* (*avi-*

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culare), called 'cow grass,' grows most luxuriantly, the roots sometimes two feet in depth, and the plants spreading over an area from four to five feet in diameter. The dock (*Rumex obtusifolius* or *R. crispus*) is to be found in every river-bed, extending into the valleys of the mountain-rivers, until these become mere torrents. The sow thistle is spread all over the country, growing luxuriantly nearly up to 6,000 feet. The watercress increases in our still rivers to such an extent as to threaten to choke them altogether; in fact, in the Avon, a still deep stream running through Christ Church, the annual cost of keeping the river free for boat navigation and for purposes of drainage exceeds 300*l*. I have measured stems twelve feet long and three-quarters of an inch in diameter. In some of the mountain districts, where the soil is loose, the white clover is completely displacing the native grasses, forming a close sward. Foreign trees are also very luxuriant in growth. The gum-trees of Australia, the poplars and willows particularly, grow most rapidly. In fact, the young native vegetation appears to shrink from competition with these more vigorous intruders."

Dr. Haast, F.L.S., the eminent explorer and geologist, also writes to me as follows:

"The native (Maori) saying is, 'as the white man's rat has driven away the native rat, as the European fly drives away our own, and the clover kills our fern, so will the Maori disappear before the white man himself.' It is wonderful to behold the botanical and zoological changes which have taken place since first Captain Cook set foot in New Zealand. Some pigs, which he and other navigators left with the natives, have increased and run wild in such a way that it is impossible to destroy them. There are large tracts of country where they reign supreme. The soil looks as if ploughed by their burrowing. Some station holders of 100,000 acres have had to make contracts for killing them at 6*d*. per tail, and as many as 22,000 on a single run have been killed by adventurous parties without any diminution being discernible. Not only are they obnoxious by occupying the ground which the sheep farmer needs for his flocks, but they assiduously follow the ewes when lambing, and devour the poor lambs as soon as they make their appearance. They do not exist on the western side of the Alps, and only on the lower grounds on the eastern side where the snow seldom falls, so that the explorer has not the advantage of profiting by their existence where food is scarcest. The boars are sometimes very large, covered with long, black bristles, and have enormous tusks, resembling closely the wild boar of the Ardennes, and they are equally savage and courageous.

"Another interesting fact is the appearance of the Norwegian rat. It has thoroughly extirpated the native rat, and is to be

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found everywhere, even in the very heart of the Alps, growing to a very large size. The European mouse follows it closely, and, what is more surprising, where it makes its appearance it drives, in a great degree, the Norway rat away. Amongst other quadrupeds, cattle, dogs and cats are found in a wild state, but not abundantly.

"The European house-fly is another importation. When it arrives it repels the blue-bottle of New Zealand, which seems to shun its company. But the spread of the European insect goes on very slowly, so that settlers, knowing its utility, have carried it in boxes and bottles to their new inland stations."

But the most remarkable fact of all has been communicated to me since the above was printed, viz.: that the little, white clover, and other herbs, are actually strangling and killing outright the New Zealand flax (*Phormium tenax*), a plant of the coarsest, hardest and toughest description, that forms huge matted patches of woody rhizomes, which send up tufts of sword-like leaves, six to ten feet high, and inconceivably strong in texture and fibre. I know of no English plant to which the New Zealand flax can be likened, so as to give an idea of its robust constitution and habit to those who do not know it; in some respects the great matted *tussocks* of *Carex paniculata* approach it. It is difficult enough to imagine the possibility of white clover invading our bogs, and smothering the tussocks of this Carex, but this would be child's play in comparison with the resistance the Phormium would seem to offer.

The causes of this prepotency of the European weeds are probably many and complicated; one very powerful one is the nature of the New Zealand climate, which favors the duration of life in individuals, and hence gives both perennials and annuals a lengthened growing season, and, in the case of some, more than one seed crop in the year. This is seen in the tendency of mignionette and annual stocks to become biennial and even perennial, in the indigenous form of *Cardamine hirsuta* being perennial, and in the fact that many weeds that seed but once with us seed during a greater part of the year in New Zealand. Another cause must be sought in the fact that more of their seeds escape the ravages of birds and insects in New Zealand than in England; the graniverous birds and insects that follow cultivation not having been transported to the Antipodes with the weeds, or, at least, not in proportionate numbers.

Still the fact remains as yet unaccounted for, that annual weeds which, except for the interference of man, would with us have no chance in the struggle with perennials, in New Zealand have spread in inconceivable quantities into the wildest glens, long before either white men or even their cattle and

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flocks penetrate to their recesses. Such is the testimony of Drs. Haast and Hector and Mr. Travers, the original explorers of large areas of different parts of the almost uninhabited middle island, and who have sent to me, as native plants, from hitherto unvisited tracts, British weeds that were not found in the island by the careful botanists (Banks, Solander, Forster and Sparrmann) who accompanied Captain Cook in his voyages; and which were not found by the earlier missionaries, but which of late years have abounded on the low lands near every settlement.

This subject of the comparative great vis-vitæ of European plants, as compared with those of other countries, involves problems of the highest interest in botanical science, and the subject is as novel as it is interesting; it is quite a virgin one, and requires the calmest and most unprejudiced judgment to treat it well. It cannot be doubted that the progress of civilization in Europe and Asia has, whilst it has led to the incessant harassing of the soil, led also to the abundant development of a class of plants, annual, biennial and perennial, which increase more rapidly and obtain a greater development when transplanted to the Southern Hemisphere than they have hitherto done in the Northern, and that, in this respect, they contrast strikingly with the behavior of plants of the Southern Hemisphere when transplanted to the Northern; and hitherto no considerations of climate, soil or circumstance have sufficed to explain this phenomenon.—*Science Review.*

ORIGIN OF PETROLEUM.

Although nearly all geologists are agreed as to the organic origin of petroleum, a great many are of opinion that the rock oil is the result of a natural distillation of coal. Prof. Hitchcock, however, no mean authority, has come to a different conclusion. Admitting, with all who have carefully studied the matter, that petroleum is of organic origin, he says that, in his opinion, it comes from plants, and that it is not, as some have suggested, a fish-oil or a substance altered to adipocere. It does not appear to be the result of a natural distillation of coal, since its chemical composition is different from the oil manufactured artificially from the cannels, containing neither nitrobenzole nor aniline. Moreover, petroleum occupied fissures in the Silurian and Devonian strata long before the trees of the coal period were growing in their native forests. The nearly universal association of brine with petroleum, and the fact of the slight solubility of hydro-carbons in fresh, but insolubility in salt water, excite the inquiry whether the salt water of primæval lagoons may not have prevented the escape of the vegetable gases beneath, and condensed them into liquids.—*Science Review.*

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ON RIGID PERINEUM.

By Dr. James Beatty, Dublin.

The management of the last part of the second stage of labor is often attended with difficulties that demand the utmost care, and are productive of serious anxieties in the mind of the individual charged with the conduct of the case. This remark applies more particularly to the phenomena of parturition in primipari, though at times circumstances of a similar nature are found to create embarrassment in those who have already borne a child at the full period.

All persons who have been any time engaged in the practice of midwifery are well acquainted with the tantalizing torments of a rigid perineum. Hour after hour the attendant sits by the bedside; every pain distending the soft parts seems destined to be the last; the structures, strained to the utmost, seem incapable of further resistance, yet they do resist, until finally a rent at the fourchette takes place, most commonly to a small extent, some times to a more considerable one, and the head of the child escapes from the pelvis. In many cases of moderate rigidity, the delivery is accomplished without any rent; but in the more obstinate cases, the greatest amount of care, exercised by the most skillful hand, will fail to prevent some amount of laceration. A knowledge of this fact should lead us to be very cautious in dealing with the reputation of the attendant who has the misfortune of having such a case under his charge. Every man in practice is likely to encounter such cases, and in some of them no man can prevent the accident. In speaking of this subject, Dr. Denman makes the following remarks: "That some degrees of laceration should sometimes occur will not be surprising, if we consider the great change and violence which all those parts sustain at the time when the head of the child is passing through them, or that when a laceration begins it should extend through a part rendered at that time extremely thin, and suffering an equal degree of force. When the perineum is indisposed to distend, or if when distended it can not permit the head of the child to pass with facility, the anterior part of the rectum is dragged out, and gives to the perineum a temporary elongation. The true perineum, and the temporary, as it may be called, thus forming an equal uninterrupted space; if a laceration should commence at any part it might, with the greatest care, extend through the whole.

"That kind of laceration of the perineum which commences at the anterior edge, and runs obliquely or directly backwards, is alluded to in every dissertation on this subject. But there have been many instances of another kind of laceration, which

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may be called a bursting or perforation of the perineum at that part which is connected with the circumference of the anus, when the anterior part is preserved, and through such perforation, it is said, children have sometimes been expelled."

A remarkable case of this kind occurred in the practice of the late Dr. Beatty, in the year 1808, from whose case book I now quote:

"October 17, 1808.—I saw this patient in labor with her first child, about seven o'clock in the evening, after having had slight pains during the day with very little effect on the os uteri. I saw her again 10½ P. M., when the progress of labor appeared to be slow. While I remained with her the pains became more frequent, and in a very short time the head rested on the perineum; but what appeared strange to me was, that though the pains continued to be very severe, and tumor caused by the head distending the perineum to increase, there was not the slightest dilation of the os externum beyond its original size. In about an hour the head of the child was entirely expelled from the bony pelvis, and the external parts formed a bag or cap for it, which was forcibly distended at every pain. My fears of a laceration now increased so much that I thought it necessary to explain them to an intelligent woman who was with us, and to make her examine the parts, that she might be convinced of the impossibility of preventing it; at the same time I used lubricants to satisfy the friends that I would do everything in my power for my patient. At length I found the perineum begin to chip or crack at the prominent part, and soon after give away to such an extent that the child was passed through the aperture, though it did not communicate with the os externum. The placenta was delivered through the same passage; and when I told the lady that she had had the most painful labor I had ever met with, she said she expected such, from a contraction which had taken place in those parts when she was young, after a fever—a contraction which had almost prohibited coition.

"The os externum had left an oval mark on the child's head, which I measured, and found to be 2½ by 1¼ inches, and which was the full extent to which the vulva would yield.

October 28.—This day examined the state of the parts, and found both the sphincters of vagina and anus entire and undisturbed, and the rectum uninjured. The patient was able to walk a little through her room. The wound was in a healthy state, and likely to heal."

But such an accident as this is not the worst that occurs under similar circumstances. A more frequent result is the extension of the rent, commencing in the middle and most prominent part of the distended perineum, and its prolonga-

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tion through the sphincter ani behind, and the vulva before, thus throwing the two passages into one, and entailing the misery of uncontrolled defecation upon the unfortunate patient.

As I have already said, no amount of the most careful attention on the part of the medical attendant can prevent some of these extensive lacerations at times. The split will begin either in front, and run back to the anus or into it; or it may begin in the middle and embrace both sphincters before it stops; or the head may come through the rent in the middle, and leave both sphincters untorn. In whichever of these ways the struggle terminates the result is very calamitous, and entails a vast amount of suffering on the patient and of trouble to the attendant in whose hands the accident has occurred, to whom the patient and her friends will attribute all the blame. These cases are, in the present day, not so lamentable as they were formerly, for plastic surgery and wire sutures enable us now to remedy the evils in a manner that would astonish our forefathers. I look back with regret to the case of a most interesting, very handsome patient, twenty-five years of age, the wife of a cavalry officer, who passed through my hands thirty years ago. I was engaged to attend her with her second child, and when her labor began I was surprised to find the perineum split into the rectum. I learned that this had happened in her first confinement, which took place before she came to this country, and, as usual, the strongest invectives were heaped upon the head of the unfortunate doctor who had attended her. Her second labor, I need not say was easy enough, and I saw her for a long time after her recovery. But her life was miserable; she could not venture into society, for she was unable to control the passage of feces or of flatus from the bowels, and she never knew when one or other would escape. If I then knew and could have done what I now know and can do, I would have been able to restore that young creature to health and comfort, and to that position in society which she was intended to adorn. I think it is extremely probable that cases like this are more numerous than is generally believed. Until very recently, it was too well known that nothing could be done to relieve them, and unfortunate sufferers bore their misery in silence, not wishing, naturally enough, to make known their infirmity when of such a disgusting and incurable nature. Since the means of remedying the evil have been devised and successfully practiced, the number of cases that seek relief has been wonderfully increased; and in the last edition of Mr. Baker Brown's work on the surgical diseases of women, he gives the details of no less than 112 cases in which he has operated. When such a vast number has fallen to the lot of one surgeon, we may have some idea of the multitude that must be scattered over the empire.

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Seeing, then, that extensive laceration of the perineum is of sufficiently frequent occurrence to arrest the attention; and knowing, as we do, that at times the most skillful care, as at present practiced, is impotent to avert the calamity, it behooves us to inquire more particularly into the nature of the cases, and ascertain the cause of the accident, with the view of discovering some means of preventing it more effectual than those in ordinary use. When we look back on our own experience, and read accounts of such cases in authors who have treated the subject, we find that the conditions of the parts for some time preceding the rupture is as follows: The head of the child has escaped from all bony resistance, and is well out of the pelvis, carrying the perineum and anterior wall of the rectum before it, these parts forming a cap or a bag in which the head lies. The vulva however, remains undilated, the efforts of the uterus seem unavailing to cause any extension of that opening, and the head, which in the earlier stage of this part of the process had been driven against it, has now, by the yielding of the perineum, sunk below its level; and every pain drives it lower, so that all the force is expended in an endeavor to tear through the bag in which the head is embraced. The soft parts finally give way, often in the middle, most prominent part, and the rupture is effected. The term rigid perineum is, in fact, hardly applicable to these cases; it is the vulva that is rigid, and its resistance that causes the mischief. It is unyielding of the vulva that is the immediate cause of the danger.

Let us now turn to nature's book, and inquire what means she adopts to escape from the difficulty in cases somewhat less exaggerated than those I have just described. In minor degrees of rigid vulva the head is enabled to take a more forward course, a greater amount of it is permitted to emerge at each pain, but the tissues will not or can not yield sufficiently to permit the head to pass through; the opening must be enlarged before delivery takes place, and accordingly in a vast number of such cases, it is notorious that some fibres of the fourchette give way, and immediately the head is expelled. A great deal may be done by carefully supporting the perineum to prevent this rent going too far, but no amount of care will prevent some laceration in many of these cases. Nature I believe to be a very good doctor, and often accomplishes her ends better than the best of us, and moreover, often points out to us the right way to help her out of difficulties, if we study her proceedings, and are not too proud or too timid to imitate her.

The following case will show what can be done by taking nature as a guide:

On the 14th day of November, 1866, a remarkably fine, well-made lady, twenty-five years of age, and just nine months mar-

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ried, took labor at 2 o'clock A. M. I was sent for, and saw her at 8 o'clock A. M., at which time the head of the child was well down through the pelvis and nearly rested on the perineum. The head was covered by the still undilated uterus, the os uteri being the size of a two-shilling piece. The vulva was very small, but did not seem rigid. The pains were natural, the os slowly dilated under their influence, and in another hour, at 9 A. M., it was fully open, and the head distended the perineum at every pain. I looked forward to a speedy delivery, and took my place by the bedside. The head came lower and lower, pushing the distended perineum before it, and at each pain a small portion of a very hairy scalp was protruded through the vulva. In this position I remained from 9 A. M. to 2 P. M., just five hours, during which time the pains were increasing and more violent, distending the perineum to a frightful extent. I wished to give her chloroform, but she refused to have it. The perineum seemed like a bag, into which the head was driven, with every intention to tear through it. The soft parts over the head, from the edge of the anus to the fourchette, measured nearly three and a half inches; the anus was distended at every pain, showing fully an inch and half of the interior of the rectum. During the whole of this time there was no further dilation of the vulva, and no advance of the head forward; the whole force of the uterus seemed to be directed toward driving the head either through the perineum or through the rectum. It became quite manifest that one or other of these must occur, for there did not appear to be the least chance of the head escaping through the vulva. When matters were in this state, at the end of five hours' most desperate struggle, I argued with myself that if nature so often puts an end to such difficulty by the yielding of the fourchette and anterior fibres of the perineum, the best way to rescue my patient from the frightful laceration that was so impending would be to imitate nature, and enlarge the opening of the vulva. Accordingly, seizing the moment when a furious pain that almost drove the head through everything had subsided, I introduced one blade of a probe-pointed scissors between the perineum and the head and divided an inch of the soft parts. The very next pain passed the head out through the vulva with the greatest ease, without a single fibre being torn, or the slightest extension of the opening I had made. The recovery was perfect. No treatment beyond ordinary washing was adopted for the wound, which healed spontaneously, so that the nurse in attendance remarked to me some days after that I ought to have taken measures to prevent it healing so well, for there would be the same trouble at her next labor. By this simple imitation of what nature so often does I terminated a most difficult and perilous labor

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without the slightest ill result to the patient. I find, in two recent authors, allusions to an operation similar to that which I have just described. Dr. Hall Davis says: "In organic or structural rigidities due to hard cicatrices from former sloughings, sometimes depending upon plastic operations extended too far forward to admit of the exit of the head, these means (chloroform, warm fomentations, unctuous applications and warm water enemata) may fail. In two cases last year under my care such cicatrices were the obstacles, and not yielding to chloroform, in one a rent was inevitable, which, however, left an adequate perineum behind. In the other case, rupture being expected every moment, I summoned the surgeon who had operated and suggested his making a slight bilateral incision downward and outward to the extent of a quarter of an inch. This sufficed, and the child, living, immediately passed out without any extension of the incision, which had healed in two days afterward; thus the perineum was saved." In cases where rupture seems inevitable during delivery, Dr. Blundell recommended and practiced the plan of relieving the tension of the perineum by a slight lateral or oblique incision during a pain, thus actually producing a laceration, but one of no moment, if it serve as intended, to prevent the tear along the meridian line, where it naturally takes place, and proves of serious consequence. This plan I concur with, and would practice when chloroform failed or could not be administered. MM. Paul Dubois and Chailly-Honore advocate an oblique incision of the vulva toward the perineum about a third of an inch long, either to prevent altogether the rupture of that region when much distended, or when the laceration is unavoidable, to favor it at a spot where it may produce the least mischief. The writers support their views by the history of successful cases. Since reading the above quotation I have searched through Dr. Blundell's work, and not finding any allusion to the operation in question, I inquired from Mr. Baker Brown, and he has kindly informed me that he attended Dr. Blundell's lectures and heard him advocate the proceeding.

I am quite sure that none of the members of the society will imagine that I undervalue the well-known means so advantageously employed to induce relaxation of the perineum and vulva, such as bleeding, antimony, chloroform, warm fomentations and lubricants, or the protection to be obtained by careful support of the perineum; my object of this communication is to impress upon them that in extreme cases, such as I have described, after all ordinary means have failed, and frightful injury is impending, a simple operation in imitation of what nature does will avert the danger and place the patient and her off-spring in safety.—*Proceedings Dublin Obstetrical Society.*

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SUBJECTIVE AUDITORY PHENOMENA DEPENDENT UPON DISEASE OF THE ORGANS OF HEARING.

By Dr. Adam Politzer.

The following affections of the organs of hearing may excite buzzing or rushing noises in the ears:

1. Ceruminous concretions. The rushing noise in cases of this kind may be caused by abnormal pressure upon the membrana tympani and the structures in connection with it, or less frequently by retention of air within the external meatus.

2. Furuncle of the meatus auditorius externus. Here the cause of the noise may be closing of the meatus, sometimes associated with hyperæmia of the membrana tympani and labyrinth, or reflex-action of the auditory nerve, excited through those branches of the fifth nerve which are distributed to the external ear.

3. Eczema of the outer portion of the meatus. The cause of the rushing may be obstruction of the meatus externus through excreted epidermis, co-existent swelling of the mucous membrane of the tympanum, or reflex-action of the auditory nerve.

4. Acute inflammation of the membrana tympani, producing hyperæmia of the labyrinth.

5. Affections of the tympanum are the causes, in more than two-thirds of all the cases, of buzzing in the ears. The noises occur far less frequently in purulent catarrh *with* perforation of the membrana tympani than in simple catarrh *without* a perforation. The noise may be owing to great intra-auricular pressure, which causes an abnormal stretching and irritation of the terminal fibres of the auditory nerve, and also disturbs the circulation in the labyrinth, and consequently the nutrition of the nerves. Hyperæmia of the tympanic mucous membrane or secondary changes in the labyrinth, such as persistent hyperæmia, dilatation of the vessels, chronic exudation, and the formation of chalk-stones and pigment, may be the causes of subjective sensations of hearing.

6. Primary structural changes in the labyrinth, as ecchymoses, extravasations of blood, new formations in the cochlea and in the nerve-tissues; chalk masses in the labyrinth, varicose dilatation of the vessels of the auditory nerves, colloid degeneration of the nerves.

Politzer, from his own extensive experience, is able to corroborate Türk's assertion, that subjective noises can in many cases be varied in intensity by pressure upon the mastoid process of the temporal bone, or upon the first cervical vertebræ.

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It was observed in cases of disease of the tympanum and Eustachian tube, also in cases where the diagnosis between the disease of the tympanum and labyrinth was uncertain, that the noises were in many instances diminished, and also in some cases, but less frequently, increased in intensity, so long as pressure was made upon the mastoid process. Politzer also mentions a remarkable phenomenon which has been observed, but of which he can not give an explanation, in an instance of impared hearing on one side; when the sound ear was stopped by the finger a rushing noise was heard in the opposite diseased organ; this noise, according to the statement of the patient, was of great intensity, but disappeared as soon as the finger was removed from the healthy ear.

Politzer mentions the following as noises produced in the internal ear: 1. The snapping noise, which, according to J. Muller, is caused by the spasmodic contraction of the tensor tympani muscle. 2. The rattling noise dependent upon catarrh of the middle ear. 3. The noise caused by the circulation of the blood.

Politzer does not speak favorably of the action of the narcotic internal remedies which have been recommended in cases of subjective noises in the ears; but he has, however, observed a very great abatement of the annoyance after the *external* application of narcotics, either as embrocation or in drops. He places no reliance upon counter-irritants, blisters, &c. Internal remedies have but very little influence, except in exceptional instances, such as cases of constitutional syphilis, which should be treated by iodide of potassium.—*Rankin's Abstract.*

ON TUMORS OF THE SCROTUM IN INFANTS.

Some very curious cases of testicular and peritesticular tumors in young boys were presented to the Anatomical Society of Paris by M. Louvet. These cases formed the subject of a very interesting report by M. Hayem.

The first case was one of tuberculization of the epididymis in a child five and a half years of age; another case was one of encephaloid cancer of the testicle in a child aged sixteen months; the third was one of fibro-plastic tumor without the testicle in a boy aged seven years and a half. These tumors had been removed by M. Giraldès, and submitted to the members of the society for examination. M. Hayem was requested to make a microscopical investigation. These cases are re-

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markable, especially on account of the ages of the patients, for all surgical authors agree in the statement that tubercular and cancerous deposits are not met with in the generative organs before the period of puberty. The case of fibro-plastic tumor seems to be altogether exceptional, and no instance can be found reported by authors that in any way resembles it.

In the cases of M. Louvet, the tubercle was developed in the epididymis to the exclusion of the testicle; the cancerous deposit was found in the seminal gland itself, and the epididymis remained intact: this is contrary to the opinion of M. Robin, who asserts that cancerous sarcocele is developed in the epididymis, and does not attack the testicle. The fibro plastic tumor was formed without the tunica vaginalis, which it inclosed on every side, forming around it a more or less thickened shell. No doubt remained as to the intimate nature of these tumors after microscopical examination.

M. Hayem, in discussing the clinical history of the patients who were affected with these tumors, showed that difficulties almost insurmountable were presented to the diagnosis; for these tumors are much more difficult to recognize in the infant than in the adult, and each variety is not marked by its special symptoms. The case of tuberculous disease of the epididymis alone presented sufficient signs to allow of the surgeon's making a diagnosis.

The following are the conclusions of M. Hayem concerning prognosis and treatment:

The immediate prognosis in these cases was not very unfavorable; but when considered with a view to the future it remains very obscure. With regard to treatment, it appears from the practice of M. Giraldès, and from the results derived from it, that castration ought to be performed as soon as the surgeon is convinced of the existence of a tumor which may destroy the testicle. But if tubercular deposit can be diagnosed with certainty, it may be asked whether, as in the case of the adult, the surgeon should not wait before deciding upon the removal of an organ the important functions of which are not completely impaired.—*Rankin's Abstract.*

THE FISHES OF THE AMAZON.

The district of the Amazon seems to swarm with all forms of organic life. Of the land animals a very able and graphic account has already been given by Mr. Bates, and now Professor Agassiz has given an account of his elaborate investigation of the fish of the Amazon. In a lecture delivered quite recently at

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New York, Professor Agassiz stated that he found that the Amazon has not one fish in common with any other fresh-water basin; that different parts of the Amazon have fishes peculiar to themselves; and, as an instance of the teeming variety that exists in the Amazon basin, he gave the result of his examination of a small contiguous lake or pool, of only a few hundred square yards, which showed 200 different kinds of fishes, which is three times as many as the Mississippi river can boast. In the Amazon itself he found 2,000 different kinds, and when he began his investigation of the river only 150 were known to exist, and he said that in proportion as he found the larger number the difference between them seem to grow. He proceeded to a general classification of the fishes of the Amazon, and instanced one that might appropriately be called a very peculiar fish, inasmuch as it had the power of walking or creeping on dry land, one having been found five miles from the water, and the Professor himself kept one of them out of water half a day, and on putting it back into its natural element it showed as much of life as if it had never been removed. Moreover, it is an agile fish, worming its way up the inclined plane of the trunk of some old tree that had fallen, and twisting about among the branches, until finally a single shot has brought down a bird and a fish together. Professor Agassiz declared that the Amazon, for a river of turbid water and of so high a temperature, the average being 80 deg., nourishes an extraordinary number of delicious fishes for table use.—*Science Review.*

ON PROLAPSE OF THE URETHRA IN CHILDREN.

By M. Guersant.

M. Guersant has met with twelve or fifteen cases of prolapsed urethra in girls from two to twelve years of age, although this affection is scarcely mentioned in the literature of the diseases of the urinary passages. He attributes it to the following causes: 1. Repeated straining, as in the cough of pertusis and chronic bronchitis, and in the repeated and forced attempts at defecation consequent upon constipation. 2. General debility. Dr. Guersant has met with prolapse of the mucous membrane of the urethra in young girls during a long convalescence from acute disease, and during chronic affections. The infants do not suffer much from this affection; there is sometimes a frequent desire to micturate and scalding during the passage of urine. If the parts be examined, the vulva will be found redder than it usually is, and at the meatus urinarius

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will be observed a small rosy swelling, apparently proceeding from the interior of the canal, and the surface of which is formed of mucous membrane; at the centre of this little tumor, there is an orifice through which a sound may be passed and carried into the bladder. This state of things may continue for a long time without producing any disturbance, but sometimes the swelling increases gradually, and gives off a sanguineous discharge which afterwards becomes purulent, its surface becomes irritated, and superficial sloughing may occur, with inflammation of the adjoining parts and vulvitis.

Prolapse of the mucous membrane of the urethra may be diagnosed from a urethral polypus by its forming a circular swelling with a depressed centre at the meatus, and by the absence of a pedicle.

In the treatment of this affection M. Guersant prefers incision to cauterization or the ligature, as the growth is by this means removed promptly, and the child is sooner restored to its normal condition. He does not administer chloroform in this operation, except the little patient be timid or difficult to manage. The labia majora having been separated by an assistant, the prolapsed portion is drawn forwards either by a tenaculum or by a loop of thread, and then snipped off at one stroke by curved scissors. If there be much hemorrhage, it may be arrested by the application of a solution of perchloride of iron, or by pressing upon the womb for some seconds a small plug of agaris saturated with the styptic fluid. Frequent washing with cold water and the occasional application of the stick of nitrate of silver will suffice to produce cicatrization. Micturition is painful for a few days after the operation, but this will not continue long.

In one case where the projection had been incised, and the subsequent hemorrhage could not be arrested by the perchloride of iron, M. Guersant applied a bladder of ice over the hypogastric region and the front of the vulva for twenty four hours; this plan was followed by success.—*Bulletin de Thérapeutique, Rankin's Abstract.*

BLOOD POISONING AFTER SURGICAL OPERATIONS.

The researches and experiments of M. Maisonneuve prove that nearly 95 per cent. of the sequelæ of surgical operations result from the action of morbid products developed in the wound, and subsequently absorbed into the system. He puts forward his ideas in the following systematic fashion: 1. The blood and other animal fluids, when exposed freely to the air, or in contact with aqueous substances, soon lose their vitality. 2. Once

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dead, they are liable to putrefy under the influence of heat, moisture and air. 3. The products of such putrefaction are highly poisonous. 4. It is the same with such secretions as the urine, bile and intestinal juices. 5. In infiltrating the permeable tissues with which they are in contact, these poisoned liquids give rise to gangrene, erysipelas, &c. 6. These same liquids, either by themselves or mixed with the special products of inflammation they provoke, can, in entering the circulation, alter the blood and disturb important functions. 7. After their expulsion from the general blood-vessels, they may remain in the capillaries, the parenchymata, serous tissues, &c., and give rise to abscess, anthrax, &c. 8. The entirety of the disturbances constitutes surgical fevers. To prevent these terrible consequences of operations, M. Maisonneuve suggests the adoption of the subcutaneous method, and the employment of all means of preventing putrefactive processes.—*Science Review.*

PRESERVED HUMAN FLESH.

"Every one has heard of the wonderful discovery of an Italian surgeon, forty years ago, by which he petrified human flesh, and was able to cut the body into transverse sections for the manufacture of tables and the like, the various colors being perfectly preserved; and how this surgeon, after completing his inuention, died suddenly without having disclosed the secret. Ever since then other Italian surgeons, with his specimens before them, have been seeking the lost secret, and in their searches have fallen upon something else. Here is Dr. Brunetti, of Padua, who exhibits a large collection of preserved human flesh, healthy and diseased, for which the jury of the Exposition on that class have granted him a grand medal.

"Great advances have been made in preserving anatomical specimens bs means of chlorate of potash, arsenic and other preservatives; there are even some excellent specimens of this kind at the Exposition; but if damp they eventually decay, and if dry they warp, shrink and get out of place. By M. Brunetti's discovery we have none of this. The first glance at his preparations gives one the idea of lignous fibre boiled and dried; but the colors are tolerably well preserved. His specimens do not look petrified, and are not; they look, on the contrary, dry, porous and light, and as if they would last for ages. Here are specimens of healthy and diseased liver, of healthy and diseased lung, of healthy and diseased kidney—in fact, of healthy and diseased tissue from all parts of the body. In the lung we see specimens of interstitial granulations, of tubercles, and of

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cavities after abscesses. All this is so plain that a child might learn how the lung looks in the various diseased states to which it is subject. So, too, there are slices of liver and kidney showing fasty degeneration and cyrrhosis of the first, and Bright's disease of the latter.

"The discovery of M. Brunetti, therefore, though not so wonderful nor so perfect as its lost predecessor, is still an important discovery, and, when its author sees fit to make it public, will render to schools an immense service."—*Exchange.*

A NEW METEORITE.

It is stated that some very large and heavy meteorites, which fell during last summer in Hungary, have been recently examined. The circumstances under which the fall occurred are interesting, the sky being quite clear, between four and five in the afternoon. At the time of the fall a violent detonation was heard, similar to that produced by the simultaneous discharge of a hundred cannons. The meteorites appeared as a greyish cloud, about the size of the sun's disc, uniting on all sides columns of greyish smoke, but without a trace of luminous appearance. Two or three minutes after this appearance, a noise was heard like that of a multitude of stones rattling together; this lasted for ten or fifteen minutes, and after it the fall of stones took place. Several eye-witnesses, at localities six to twelve Austrian miles distant, describe the meteor as having presented the appearance of a yellow and orange luminous globe, followed by a train bordered with ultramarine blue. About sixty stones were collected, and were found to possess the usual characters of meteors, being covered also with a layer of black enamel. The heaviest of these weighed 550 lbs.; it was broken in two by the violence of the shock, and from the violence with which it fell to the earth it passed into the soil to the depth of eleven Austrian feet, in this way forming a hole or pit nearly four feet wide. At a temperature of 20° Reaumur, they had a specific gravity of 3·520. When first found the meteorites were quite hot, and some of them retained their heat for several days.—*Science Review.*

CASCADE LAKE, OREGON.

In Oregon, in the Cascade Mountains, at a point about seventy-five miles northeast from the town of Jacksonville, is a body of water called the Great Sunken Lake. The mountains all around this lake average two thousand feet high. They are al-

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most perpendicular, running down into the water and leaving no beach. The depth of the water is unknown, and its surface is smooth and unruffled, as it lies so far below the surface of the mountain that the air currents do not affect it. Its length is estimated at twelve miles, and its breadth at ten. No living man, it is said, ever has, or probably ever will be, able to reach the water's edge. It lies silent, still and mysterious in the bosom of the "everlasting hills," like a huge well, scooped out by the hands of the giant genii of the mountains in unknown ages gone by, and around it the primeval forests watch and ward are keeping. The visiting party who make this report of the lake fired a rifle several times into the water at an angle of forty-five degrees, and were able to note several seconds of time from the report of the gun until the ball struck the water.

PECULIARITIES OF LANGUAGES.

In all hot countries men use, in speaking, a multitude of vowels, which are pronounced by greater or lesser apertions of the mouth, in breathing and in speaking, and use very few consonants, all of which are produced by more or less complete interruption of the breath, and contact, or even closure of parts, among the organs of speech. Any one who examines the Italian language will find, therefore, about sixty vowels in every one hundred letters; and in the Otaheitean (Tahitian) language, which sounds very like Italian, there are even more; it is said about seventy-five or eighty vowels in every one hundred letters. The proportion is very different in English, in which consonants preponderate; and if we examine the language of Lapland, or Greenland, or of the Arctic-American Esquimaux, we shall find that there is an enormous number of consonants in their more than sesquipedalian words, and that most of these are guttural, as they do not like to open their mouths to the cold air sufficiently to pronounce the labial, dental or lingual consonants, much less the vowels, and least of all the more open of the vowels. This is a universal law; though immigration or colonization, or the ancient transplantation of a whole nation by a tyrant conqueror, may sometimes present an apparent exception or anomaly, by our finding a language or a people, originally temperate or torrid, in a frigid zone, or *vice versa*.

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THE MEDICAL REPORTER.

ST. LOUIS, SEPTEMBER 15, 1867.

REVIEWS.

TWO CASES OF ŒSOPHAGOTOMY. By DAVID W. CHEEVER, M. D., Surgeon to the Boston City Hospital.

The pamphlet before us contains a very minute report of two cases in which this operation was performed for the removal of foreign bodies—the results were favorable. In connection we have an elaborate history of the operation from 1738 to the present time, with a history of nineteen cases, carefully tabulated. The production is valuable as giving us in parvo all that is known on the subject, and affording from the table means of judging the comparative value of surgical interference with the too frequent method of delay, and attempts at removal by extraction. The mortality in the operation is less than twenty-five per cent. The expectant treatment is surrounded by dangers, such as asphyxia, suppuration, and the like; the skillful surgeon will, in a few minutes, relieve from all such untoward accidents.

MEIGS' TREATISE ON OBSTETRICS.

We referred in our last number to this very excellent work, than which no other is more practical or more useful to student or practitioner. We are under obligations to Messrs. Keith & Woods for a copy of the same work, and take the opportunity here of making our acknowledgments to the above well-known booksellers for the many courtesies which they have habitually extended to us. We have always found on their shelves all the late medical works, at prices within the range of the market. Students and others about purchasing should not omit to call there and examine; the proprietors are always willing to have their stock examined, and we believe can provide everything in the way of medical literature.

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The Board of Health of the City of St. Louis has received two pieces of information gratis from two sources worthy of respect, and for which, no doubt, it is doubly thankful. On the one hand, it has been told that a mixed diet is proper for man, and that the prohibition as to the sale of *unripe* fruit and vegetables is simply nonsense, and that so far from having prevented our summer diseases in the smallest degree, the Board has, on the contrary, by its imprudent order increased them. On the other hand, it has been told that it is a running sore on the body politic, that it is a burden of useless expense to the citizens, that it has squandered the public means. The remedy in the one case is to let every man judge for himself as to what he shall eat or drink, or, if in doubt or ignorance, apply to his physician; in the other case, refer all questions of public hygiene to the Mayor and his police force; or, in the event they had too much of legitimate business to attend to, let every one apply to a physician to know what was the hygienic rule in the case, and comport himself accordingly. Or, in other words, to reduce the whole matter to its simplicity, in order to avoid all complication, but above all to save expense, let the municipal government be reduced to a *unit*, as much so as all diseases might be, and the individual who represented that unity consult, if somewhat overburdened by his duties, some one class for advice and assistance; all classes would be willing to aid to carry out the ideas of the head, and we should have an order of things beautiful for its simplicity and economy.

We can not undertake to reply to all this, even if able, or to a great deal more like it; those who are curious can read for themselves. All we know about the matter is, that Boards of Health, composed in part of physicians, and sanitary commissions composed entirely of physicians, as witness the cholera commission, its report on the cholera affording more information than ever known before, have been organized in all large cities, and even countries, and, strange to say, the people have abided by their decision as by the advice of one physician,

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and have found it more profitable to pay their expenses than to be without them, and have said, even in these railway days, that good came out of them—as for expense, of course they cost; see the report of the New York board in its examination of the city of New York; and see the items of expense in fitting up our City Hospital in a manner merely befitting the comfort and welfare of the poor outcasts whom society can in no otherwise provide for except in their sickness.

We are not endorsing the Board of health as its organ, but solely as an institution of great public utility. Can it be seriously denied that cleanliness is of prime importance in public hygiene? Can we laugh at the earnest efforts of the Board in cleansing our streets and cesspools, in filling ponds, in emptying houses infested with cholera, in appointing medical ward inspectors, in establishing sanitary wards, in committees, in enforcing Quarantine, in urging upon the citizen more prudence in his mode of life, in taking from him such food as all impartial physiologists acknowledge to be injurious? It is unwise to distort the tables of statistics, when we know that from the beginning to the end of the summer season there is always a gradual increase of what is termed summer disease. But when we have in the face of these figures the facts that at first when the vegetable order was established the mortality fell from 141 to 128, and at the last, when the order was repealed, the mortality increased from 175 to 202, and in addition the experience of not only physicians, but others who associated with disease, that with this fall and rise of summer disease was intimately, from bed-side observation, connected the use of fruits and vegetables, we have better evidences of the influence of the vegetable order than straining of figures can adduce.

Probably some other important meaning may be attached to this rise of disease in summer, which we will attempt to show when the season is passed and we can look back more calmly upon what is now so harshly criticized.

The Board possibly do not thank us for meddling with

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matters which they can fully manage themselves; but we can not help feeling under obligations for what it has done, and what we hope will be insisted on more strongly next year.

Structure of the Liver.—Dr. Lionel Beale's opinion as to the structure of the vertebrate liver has been recently substantiated by the researches of Herr Hering. This histologist states that the liver is constructed like other secreting glands. It is of the tubular type, with canals, anastomosing in every direction, and having a tendency to form a series of networks. Like other secretions, the bile travels along glandular canals surrounded by glandular cells. It is easy (he says) to observe this arrangement in the livers of vertebrates. Five or more cells are disposed in simple layers around the circular and minute aperture of an hepatic utricle seen in transverse section. This arrangement loses itself insensibly in that variety of structure in which there are no utricles properly so called. Occasionally may be seen four, three, or even only two cells, uniting to form a biliary canal. The Russian anatomist denies the existence of hepatic trabeculæ of biliferous capillaries, and believes that the biliary cells are persistent. He looks upon serpents' livers as the only organs for minute inquiries upon this subject.—Vide *Lancet Record of Science*, March 2.

Influence of Respiration on the Circulation.—Dr. Burdon-Sanderson, who delivered the Croonian Lecture at the Royal Society on March 7, put forward opinions relative to the influence of the respiratory movements over the movement of the blood in the great vessels, which are different from those stated in most of the existing text-books on physiology. Dr. Sanderson stated that so long as the air passages are open, each expansion of the chest is followed by increase of arterial tension, so

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that the effect of inspiration is to increase alike the pace and frequency of the heart's contraction. When, however, the respiratory apertures are closed, as in suffocation, the relations are reversed, the pressure in the arterial system being then highest in expiration, and *vice versa*.

Fossil Man in the Rhine.—In the Lehm of the Valley of the Rhine, near Colmar, there is a marly deposit composed of a mixture of clay, fine sand and carbonate of lime. It forms part of the diluvial beds, and in it M. Faudel has found a number of human and other remains. These consisted of shells, bones of a huge stag, teeth of *Elephas primigenius*, and a human frontal and right parietal bone of a man of middle size. M. Faudel concludes that man was contemporaneous with the mammoth fossil stag and bison.

Prof. Unger, the eminent Viennese botanist and paleontologist, has recently been examining the bricks used by the ancient Egyptians in the construction of the Pyramids, and more particularly those of the Pyramid of Dashour. He has discovered that the mud of which they were made contained not only a quantity of animal and vegetable matter, but also fragments of many manufactured substances, leading to the conclusion that Egypt enjoyed a high degree of civilization upwards of 5,000 years ago.—*Exchange.*

Correction. — The article on page 409, on "Spontaneous Generation," should be credited to the *American Journal of Dental Sciences*. The due credit was omitted by mistake.

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Prescription of Dr. Nott.—In a late letter from Dr. Nott, he points out an error in his prescription, on page 400, of the last number of the *Reporter*. We republish it as corrected, and can recommend it as an excellent combination:

R—Bi carb. Soda,	ʒj.
Pulv. Cort. Cinchonæ,	ʒj.
Pulv. Zingiber,	ʒj.
Pulv. Rad. Gentian,	ʒj.
Alcohol, dilute,	Oj.

Dose, a tablespoonful after each meal.

VITAL STATISTICS OF ST. LOUIS.

From August 1, to September 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	428	Still Born	84
White Females	377	Under five years of age	463
Colored Males	24	Between five and twenty years	67
Colored Females	31	Between twenty and forty years	185
Born in the United States	646	Between forty and sixty years	85
Born in Germany	121	Between sixty and eighty years	22
Born in Ireland	62	Bet. eighty and one hundred y'rs	4
Born in other countries	81	Total	860

DISEASES.

Accidents	8	Fever Typhoid	42
Abscess	1	Fever Bilious	9
Apoplexy	8	Fever Puerperal	4
Asphyxia	2	Fever Intermittent	18
Asthma	1	Fever Remittent	10
Bronchitis	7	Fever Congestive	14
Burns	2	Gastritis	5
Carditis	4	Hepatitis	5
Cancer	1	Hemorrhage	3
Cerebritis	8	Hydrocephalus	11
Cholera Morbus	178	Labor	2
Cholera Infantum	104	Marasmus	32
Convulsions	60	Meningitis	29
Congestion of Brain	31	Premature Birth	5
Cyanosis	1	Paralysis	3
Croup	3	Peritonitis	8
Diarrhœa	60	Poisoning	2
Dysentery	27	Pertussis	5
Dentition	12	Phthisis	32
Dropsy	3	Pneumonia	17
Diphtheria	1	Scarlatina	1
Delirium Tremens	1	Scrofula	2
Disease of the Heart	5	Sunstroke	3
Enteritis	18	Suicide	4
Eclampsia	1	Trismus	13
Epilepsy	2	Tetanus	3

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THE SAINT LOUIS
MEDICAL REPORTER,
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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

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HOSPITAL REPORTS.

REPORT OF NINE CASES OF CHOLERA TREATED AT THE CITY HOSPITAL.

By E. H. CLARK, M. D., Physician in charge.

[Reported for the Saint Louis Medical Reporter.]

CASE 1.—Mary Dalton, æt 50 years, native of Ireland; admitted August 16, 1867. This patient was in a state of collapse from cholera. Ordered chloroform, f℥jj; tinc. camphoræ, f℥ss.; spt. frumenti, f℥iv M. S; a tablespoonful every hour. Also, hydg. submur., gr. viii; pulv. opii., gr. iv; plumbi acet., gr. xvi; M. et in pulv. viii divide: S.; one powder after every operation. Employed, also, the subcutaneous injection of morph. sulph. in the calves of the legs. Under the above treatment the patient reacted; the pulse grew slow and full; the eyes became greatly injected; the respiration became labored. About twenty-four hours after her admission the patient died in a state of profound coma.

CASE 2.—Elizabeth O'Neil, æt 62, native of Ireland; admitted August 15, 1867, at 11 o'clock A. M. Had had diarrhœa and vomiting for several days. When she was admitted her diarrhœa had been checked, but her vomiting continued; her extremities were cold; her pulse was weak and fast; she had no cramps, but had had them; she constantly demanded water, which was freely given. She was ordered potassii bromidi, gr ℥ii; chloroformi, gtt. lx; aquæ camphoræ, f℥iii; M. sig., a tablespoon-

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ful every half hour. She took four doses of this mixture, but retained only the first two. The mixture was then discontinued, and the following was prescribed, viz: Bismuth subnitrat., gr. xviii; morphiæ acetat, gr. jss; misce et in pulv., vj divide; S.; one every two hours. Subsequently, her vomiting became less frequent; her extremities commenced to get warm.

August 16.—She had rested during the night; felt better; her extremities were warm; she was allowed some milk punch—a small quantity at a time.

August 17.—Reaction seemed to have reached its acme. To prevent a relapse the patient was ordered quiniæ sulphat gr. vj; divide in pulv. iv; one every three hours.

August 18.—The patient was convalescing; she was ordered again quiniæ sulphat gr. vj, to be taken as on the previous day; discharged August 22, cured.

Case 3.—Benjamin Simpson, æt 38 years, native of Canada; admitted August 18, 1867, about 11 o'clock A. M. He had had diarrhœa and vomiting for two or three days. On admission he was pulseless, with cold extremities, had neither diarrhœa or vomiting; had cramps in the stomach; a sinapism was applied over the abdomen. Prescribed camphoræ ʒii M. S., a teaspoonful every half-hour; 9 o'clock P. M. injected hypordermically the twentieth of a grain of atropine; the injection was made four times more, at intervals of fifteen minutes. No perceptible effect was thereby produced. The patient died at a quarter past eleven o'clock P. M.

Case 4.—Sarah Anderson, a colored washerwoman, of a short muscular build, æt 23 years, was admitted August 13, 1867, at 2 o'clock P. M. In the morning she had been attacked with cramps, diarrhœa and vomiting. On admission she was collapsed, pulseless, cold; she vomited occasionally, but had no diarrhœa; she complained of a burning thirst and clamored for water; water was allowed her. The following was prescribed, viz.: Bismuth subnitrat, gr. vi; pulv. camphoræ, pulv. opii, hyd. chlorid. mit. aa gr. iv; misce et in pulveres iv divide; S. one every four hours. Her condition did not change till about six o'clock P. M., when she began to get worse. She now had in-

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voluntary rice-water discharges. A subcutaneous injection, containing the twentieth of a grain of atropine dissolved in water, was administered three times, at intervals of fifteen minutes. No effect on pulse or pupils was perceived. At about 8 o'clock half a gallon of tepid water, holding in solution eight drachms of salt, was injected per anum. The patient was very restless, and bore the injection badly. By pressure the injection was forced to remain for nearly half an hour. On the removal of the pressure a considerable quantity of fluid escaped. The same injection per anum was again made at 10 o'clock P. M. It, too, was forced to remain for nearly half an hour, when, as before, a considerable quantity of fluid escaped. The patient died at 11 o'clock P. M.

CASE 5.—Paul Murray, (colored) æt 45 years; nativity, United States; was admitted August 14, 1867, at 4 P. M. with cholera. When admitted he was in a state of complete collapse; had constant diarrhœa, cramps in the legs and in the arms; cold extremities, no pulse. Sinapisms were applied to the legs and to the arms, and kept on as long as the patient could endure them. Prescribed plumbi acetat., gr. xij; pulv. camphoræ, gr. vj; bismuth subnitrat, vjss; misce et in pulv. vj divide; S. one powder every two hours.

August 15.—Patient had rested during the night; gave him hyd. chlorid. mit., gr. xv; divide in pulv. iii; S. one powder every forty minutes; no improvement ensued. Patient died at three o'clock P. M.

CASE 6.—David Campbell, æt 35 years, native of Scotland; admitted August 16, 1867, at 10 o'clock P. M. When brought in he was in the collapsed stage of cholera; pulseless, with cold, wrinkled extremities, livid skin, sunken eyes. He vomited some; had no diarrhœa; he had cramps in the stomach and in the calves of the legs; he had had much choleraic diarrhœa and vomiting; had not urinated since morning. Ordered chloroformi, f℥ij; tinct. camphoræ, f℥ss; spt. frumenti, f℥iv M S; a tablespoonful every half hour. Also, hyd. chlorid. mit., gr. xij; bismuthi subnitrat, gr. xv; misce et in pulv. iv divide; S. one every hour. At 11¼ o'clock P. M. injected, subcutaneously, over

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the calves of the legs, the twentieth of a grain of atropine dissolved in water. The patient's pupils dilated; his pulse became perceptible; half an hour after midnight made the same injection as before; the pulse grew fuller, the pupils fully dilated.

August 17—7¼ *o'clock A. M.*—Patient is pulseless; has cold extremities; has much jactitation; his pupils are dilated; he had no passage from the bowels last night; vomited several times. A hypodermic injection of the twentieth of a grain of atropine, dissolved in water, was again made. It produced no perceptible effect on the patient's pulse. The patient has not urinated since his admission. Ordered twenty drops of the tincture cantharidis to be taken in water every hour; also, hyd. chlorid. mit., sacchari, aa gr. vj.; misce et in pulv. iii divide; S. one powder every hour. Ordered the mixture of chloroform, camphor and whiskey to be given as it had been given till this time. Three more subsutaneous injections of the twentieth of a grain of atropine were made—one at 8 o'clock A. M., another at 8¾ o'clock, the last at 9¾ o'clock. The second and last produced the effect of making the pulse perceptible. Patient died at 1½ o'clock P. M.

Case 7.—Paul Meine, æt 30 years, native of Germany; admitted August 16, 1867, at 10 o'clock A. M., with cholera. When admitted he was collapsed; pulseless; had cold, shriveled extremities; severe cramps in the stomach, in the legs and in the forearms. He vomited considerably; had in a short space of time several small watery dejections; had not urinated since the evening before; he was very restless; craved for water to drink. Prescribed potassii bromidi, ʒij; chloroformi gtt. lx; aquæ camphoræ fʒiij M. S.; a tablespoonful every half hour. Directed, also, that fifteen drops of turpentine in an emulsion be given every hour. Allowed the patient to drink water freely. Ordered, also, sinapisms to be applied over the stomach, around the legs and forearms. At 11 o'clock A. M. injected, subcutaneously, the twentieth of a grain of atropine dissolved in water. Soon his pupils dilated; his pulse was not perceptibly affected. At 11:20 o'clock, injected as before the same quantity of the solution of atropine. The injections were made every twenty

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minutes. After the third injection the pulse became barely susceptible, and the pupils dilated more. After the fourth injection the pupils fully dilated—the pulse was a little more perceptible. The fifth injection seemed to render the pulse a little fuller, but the patient was now becoming unconscious. After the sixth and last injection his condition remained for some time unchanged. At 1½ o'clock P. M. he was perfectly unconscious, and breathed slowly and with great difficulty. He died at 2½ P. M. During the treatment he had three or four small watery stools and vomited four or five times.

CASE 8.—Phill Rollman, æt 38 years, native of Germany; admitted August 18, 1867, at 6 o'clock P. M. with cholera. The patient had diarrhœa and vomiting. His pulse was about 110 per minute; his extremities were cool. Ordered a teaspoonful of turpentine emulsion to be taken every two hours; also, hydg. submur, gr. viii; pulv. opi, gr. iv; misce et in pulv. iv divide; S.; one every three hours. Whilst under this treatment the patient again urinated; his stools became less frequent and more natural in color; his appetite returned.

August 19—1 *o'clock P. M.*—The patient's condition was rather promising. He had, however, some congestion of the brain.

August 20—11 *o'clock A. M.*—The patient died in a state of icterus and coma.

CASE 9.—John B. Glenn, æt 26 years, native of the United States; admitted August 16, 1867, at 10 o'clock A. M. with cholera. On the Sunday before, after having partaken freely of drink, had been attacked with diarrhœa and nausea. Since then he had had three or four large thin watery passages every day, and he had been obliged to go to stool occasionally at night. This morning he was seized with vomiting and cramps; his diarrhœa got worse. On admission he was weak and restless; his pulse was feeble; his extremities were cold; he vomited frequently; had frequent small rice-water dejections, and much tenesmus at stool; he was very thirsty; water was freely given. Prescribed plumbi acetat. pulv. camphoræ aa, gr. xij; bismuth subnitrat ij; hyd. chlorid. mit., gr. iv; misce et in pulveres vj

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divide; S. one powder every two hours. The patient had not urinated since yesterday. Directed a teaspoonful of turpentine emulsion, containing one part of turpentine to four of g. acaciæ, to be given every hour.

3 *o'clock P. M.*—Quit the turpentine emulsion for spiritus-etheris nitrici, of which a teaspoonful and half were ordered to be given in water every two hours. The patient's diarrhœa had abated. He asked for coffee, which was allowed him.

August 17.—Patient felt better; had slept a little last night; he still vomited often; during the day he took some milk punch —a teaspoonful occasionally; the powders were given at intervals of four or five hours; spts. etheris nitrici was continued as before; the patient urinated freely during the day.

August 18.—Was improving; the pulse was good; the extremities were warm; he had one small watery discharge; vomited twice.

August 19.—Stopped all medicines; allowed light diet.

August 20.—Convalescing.

August 24.—Patient was discharged cured.

PICRIC ACID, ITS SALTS AND THEIR PREPARATION.

By Ch. H. Krebs, Ph. D.

[Communicated for the St. Louis Medical Reporter.]

Picric acid and its salts have lately been applied in medicine as a remedy against fever and trichinæ.

It may be obtained from a great variety of organic substances; as, for instance, phenic acid, silk, salicine, indigo, aloes, benzoes, and different other resins. It is extensively used for dyeing purposes, and is for this object made from phenic acid as the cheapest mode of preparation. When phenic acid is acted upon by nitric acid under the influence of heat, it loses 3 aeq. of hydrogen, which unite with 3 aeq. of the oxygen of the nitric acid to form water, while in its place 3 aeq. of hyponitric acid are substituted.

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$$C_{12}\,H_6\,O_2+(3)\,NO_5=(3)\,HO+C_{12}\,H_3\,(\times)_3\,O_2$$

This new found body is called picric acid, or nitro-picric acid. It has a very little taste, which is also peculiar to its salts. The shortest and most simple mode of preparing it for medical purposes, is from salicine, which yields also the purest product. Salicine is heated with nine times its own weight of nitric acid of a specific gravity of 1.36 until the formation of hypo-nitric acid commences; it is then taken from the fire and placed on some hot sand, of a temperature of about 150 degrees Fahrenheit, until the violent evolution has ceased, and is then perfected in the sandbath. As soon as no more red fumes are evolved, it is taken from the fire to cool. A part of the picric acid crystallizes on cooling, in yellow scales, and these are separated from the mother liquor by filtering through a funnel, the lower end of which is loosely filled with asbestos, and the remaining crystals are drained on a tile. The mother liquor may be saturated with carbonate of potassa, which is precipitated in the form of a yellow crystalline powder, which is dissolved in alcohol to obtain the salt in crystals.

Picric acid is little soluble in water, but easily soluble in alcohol or ether. The solution has a yellow color, a very bitter taste, and reddens litmus. The salts are also yellow, crystallizable from alcohol, and detonates when thrown on a hot piece of iron. The potassa salt requires about 250 parts of water for solution, and therefore an alcoholic solution of picric acid may be used as a test for potassa salts. The picrate of potassa has the following formula:

$$PO\,C_{12}\,H_2\,N_3\,O_{13}$$

Technically picric acid is used in dyeing silk and woolen goods, and a solution of picrate of soda gives a very fine green ink, when mixed with indigo, carmine, and a small quantity of gum arabic, and sufficient water.

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THE CHIGNON FUNGUS.

By Tilbury Fox, M. D.

Nothing could more clearly have shown the amount of ignorance of the natural history of minute life abroad amongst the public, and the little trouble people will take to make the most trivial use of their common sense, when a novelty, embellished by plausible description, is presented to them, than the rampant nonsense which has been penned and believed in regard to the so-called gregarinæ infesting certain varieties of false hair. The "chignon controversy" has been one of the most widespread, but at the same time transient sensations of the age: started abroad, it soon reached England, where it bewildered the fashion-worshipers of the day. The immediate cause of this hubbub was the appearance in the Hamburg paper, *Der Frieschutz*, of the 7th of February, 1867, of an article based upon the account given in the "Archiv der Gerichtlich Medicin und Hygiene," and in which we are informed that "Mr. Lindemann professes to have discovered and observed a new microscopical parasite, to which he has given the name of Gregarine. He reports, according to his observations, that the gregarine—a protozoic animalcule—is of the lowest order of development of the animal organism, and is found parasitically within the animal and human body, where it floats about with the blood, by which it is nourished. The most striking instance of the parasitism of the gregarine is said to be its existence on the human hair. The gregarinous hair, however, differs in no way from the sound hair. Only if one looks very closely, little dark brown knots, which are generally at the free end of the hair, may be distinguished even with the naked eye. These are gregarines. Out of thirty samples of hair procured from a hairdresser in Nishni Novgorod, gregarines were found in seventy-five per cent. And it is well known that the hair used for the chignons of the better half of Russia is bought of the poor peasant women, who are proverbially of dirty habits. Pursuing his inquiry, Mr. Lindemann has discovered that almost every louse has in its interior an enormous number of gregarines, and he convinced himself by further experiments that the

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gregarines on the human hair are deposited there by lice. He observes that the most favorable conditions for the growth of gregarinæ are light, increased temperature and a moist atmosphere; and he declares that in the ballroom these are not without their influence on the parasites when they exist on false hair, for they at once revive, grow and multiply, get disseminated in millions, and in consequence of the increased respiration produced by the exertion of dancing, are inhaled freely into the lungs, reach their specific gregarine nature, and after awhile induce disease in the body."

In these quotations prevalent fashions were depicted as sources of danger, inducing discomfort and disease. A writer in one of the daily papers ("Investigator") asserted that he had witnessed from direct observation the development of gregarinæ into lice, an assumption that implies a liberty with Darwinism that its most zealous and radical devotees would at the present time hesitate to suggest. It is only just to say that the *Lancet*, which first noticed the matter, and confined itself to a mere mention of the facts, urged its readers to accept the statements put forth with the gravest caution. Lindemann's assertions are very startling to scientific men, because they are wholly in antagonism with observed facts. Whilst scientific research has as yet afforded little insight of the habits of the lower forms of animal and vegetable life, the revelations of the microscope within the last few years are pregnant with significance as regards their ubiquity, and teach us that we are not to be astonished if we find living forms in unexpected sites, undergoing the most manifold variations in aspect when brought under the play of different influences. At the same time we have the amplest experience to caution us against the acceptance of new species without the keenest criticism. What, then, is the truth in this matter? In my devotion to the subject of diseases of the skin, it has lain in my way during the last ten years to investigate the whole subject of diseases of the hair connected with the development of vegetable parasites, and I think no one has made a larger number of microscopic observations. I have never seen a true gregarina in connection with the hair; but I

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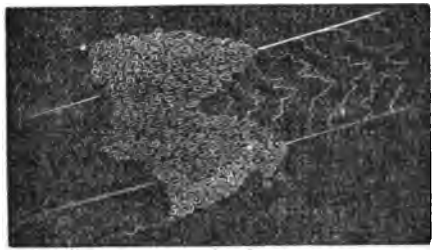
have recently found a vegetable growth on false German hair answering, in naked eye appearances, to that described by Lindemann as little dark specks surrounding the hair toward its end. Gregarinæ, according to Lindemann, are made up of cells, which he states to be vegetable, and it is possible that that which I have found may be identical with his gregarinæ. I can not help thinking that many bodies totally dissimilar in nature have been classed with gregarinæ, which my friend Ray Lankester, than whom no higher authority on the point exists, declares to be truly animal. The growth I have found I now proceed to describe.

If you take a hair on which the parasite exists, and hold it between yourself and the light, towards the outer half you will see one or more, perhaps half a dozen, little dark knots the size of pin-points, surrounding the shaft of the hair; they are readily felt on drawing the hair through the fingers; they are somewhat difficult to detach. If a hair be placed under the microscope with a quarter-inch objective, the mass will be seen to be made up of cellular bodies surrounding the hair, such as are seen in Fig. 1, kindly drawn for me by Dr. Braxton Hicks, F. R. S. It will be seen that the mass has the appearance of a fungus growth, of which two distinct forms are here present, viz., *mycelial* or *filamentous*, seen in the central part of Fig. 1; and *sporular* or *cellular*, seen in Fig. 2, which is the outer part of Fig. 1.

Fig. 1.



The hair is apparently healthy, and if the slide be pressed the mass will break away from the hair on either side, bringing away with it more or less of the cuticle, and leaving behind a healthy shaft. The cells are seen to be of various shapes and sizes. Fig. 3 gives a good representation of them; they are from $\frac{1}{4000}$ to $\frac{1}{3000}$ inch; many

Fig. 2.

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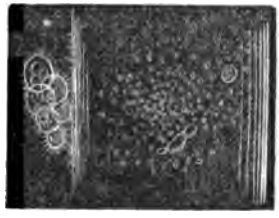
are like the tortula cells developed from Penicillium. Others are larger, undergoing division very actively; they may be sub-divided into two, three or four parts, or much more freely. This indicates the assumption by the parasite of an algal condition. In watching the mass on the hair carefully, it is evident that a number of cells become detached from the outer or sporular form, and at once move actively about. These small cells indicate an active growth by subdivision, and a fruitful source of propagation; they subsequently become the cells seen in Fig. 3. Certainly this variety of fungus so far described is the most active growth I have come across in my researches, and I have been enabled to germinate it most successfully, so as to set all questions as to its nature completely at rest. Placed under favorable circumstances in water, the spores (Fig. 3) enlarge considerably, and the mycelial filaments increase also; but there is at this time to be observed a very remarkable occurrence, though not in all cases. Some of the large cells in Fig. 1 have become filled with smaller cells; and in others, in addition to these, processes have been put forth from the circumference of the walls in a radiating manner; in other cases the enlarged cells have two long cilia attached to them, by which they move about rapidly, whilst a part of the hair, previous to this free from the fungus, has become dotted all over by minute cells similar to those seen in the interior of the larger ones. All this is seen in Fig. 4.

Fig. 3.

Fig. 4.



But, more than this, I have observed most distinctly large cells filled with smaller cells, furnished with exceedingly delicate radiating processes and putting forth pseudopodia. One of these cells of large size is represented in Fig. 5.

It will here be seen to have assumed the features of an amœboid body. Nothing could have been more distinct to myself, and those who were observing with me, than this peculiar form;

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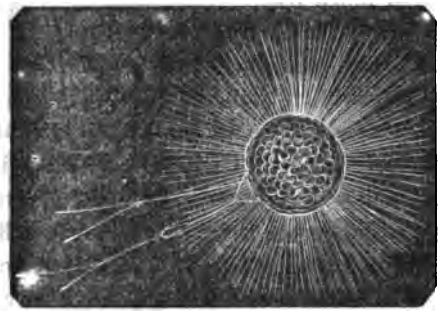
and it seems to me that we have here a pretty complete history of the life of this fungus—namely, the sporular subdividing and assuming an algal form, which in turn becomes amœbiform, and furnishes ciliated cells that supply the earliest condition of the fungus, as seen in Fig. 4, scattered over the hair.

Fig. 5.



But not satisfied with these results, I set to work to grow the fungus in sugar and water, under constant observation. A rapid enlargement of the sporular cells took place, as in the former case, and in some of the larger cells the most distinct circulation of the granules around the inner circumference of the parent cell was witnessed by myself and my friends, and a beautiful object it was. Finally, I obtained a result similar to the former one.

Fig. 6 represents the appearance of the fungus at the end of fourteen days, seen with an half-inch object glass.

Fig. 7 is a portion of the mycelium, taken from the part over the hair, more highly magnified with a 1-12th object glass.

The ends of the filaments seen in Fig. 8 are analogous, in fact identical with those forms which I have figured in my work on *parasitic diseases of the skin*, as resulting from the growth of *oidium*. The globose head contains spores, and is an early stage. The double cell figured in the centre was of a green color like many others.

Accompanying these appearances were, as in the former case, cells—filled with smaller cells and granules in active motion—furnished with cilia, and bodies undergoing the "amœboid" transformation, as seen in Figs. 9 and 10, with 1-12 inch Powell and Lealand.

Here, again, we have the growth taking on an algal phase in one direction, and fructifying into a perfect fungus on the other hand. The drawings I have given were made on the spot from

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the microscopic objects, and I must do the artist credit to say he has most faithfully and cleverly portrayed the actual appearances presented by the parasite. The observations now recorded are in complete harmony with those of Dr. Braxton Hicks on the Volvox, and De Bary in his work published, in

Fig. 6.

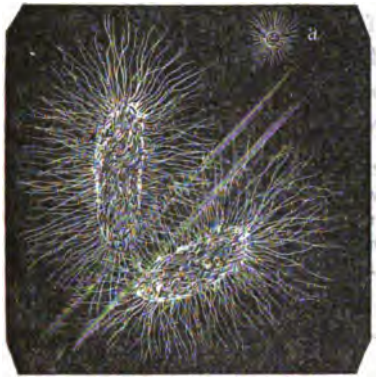
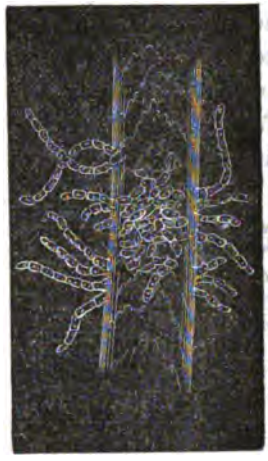


Fig. 7.



1864, at Leipsic, "Die Mycetozoen, Ein Beitrag zur Kentniss Der Neidersten Organismen," and are completely confirmatory of the opinion before advanced by myself, that the fungi found upon or within man belong to one genus, and undergo an infin-

Fig. 8.

Fig. 9.

Fig. 10.

ity of variations under different circumstances. In the present case the fungus approaches to the character of Torula rather than any other. There are many most interesting questions that can not be discussed here. The only one I need refer to is

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the influence which this species of parasite has in the production of disease. In the immediate condition in which we find it on the hair it need cause but little anxiety; but the minute form as seen in Fig. 4, transplanted to a suitable soil—and the scalp of delicate children best furnishes it—would produce disease of the scalp: of that I have no doubt. Luckily, the tissues of adults, namely, those who wear chignons, are not prone to the more severe forms of diseases produced by vegetable parasites; and as the mass of false hair used in England is free from the fungus described above, the total danger, on the whole, is slight.—*Hardwicke's Science Gossip and American Naturalist.*

NOTE.—*Torula*, *Penicillium* and *Oidium* are microscopic genera of fungi.. The word algal is derived from *alga*, a sea-weed, of which there are many minute species *Pseudopodia* is derived from the Greek, meaning "false feet;" they are the organs of locomotion, being mere extensions of the side, or walls of the body of Infusoria. In Fig. 5 they radiate like hairs from the body of the plant. *Amœba* is a low Infusorium, or Rhizopod.

ON THE MANAGEMENT OF THE SECOND STAGE OF NATURAL LABOR.

By Dr. James Hardie, Manchester.

The proposition to which I would invite your attention is this: *That in the second stage of a large number of cases of what is termed "Natural Labor," we may make use of our art in assisting nature, and thereby shortening the duration of labor, with perfect safety to mother and child: and that, this being the case, we are called upon to make a change in our practice accordingly.* I shall take it for granted, without entering into the question, that the forceps afforded the best means of accomplishing this end, and the subsequent remarks will be based on this assumption. This will be generally conceded, though I by no means insist upon it. At present I only seek the admission of the first proposition, and will then freely leave it to each individual to use whatever may most commend itself to him, whether it be forceps, vectis, air tractor, or something else.

Though the strictures enjoined by the older writers, such as Denman and Osborne, against interference are now all but

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universally considered as obsolete, still there can be no doubt that the effect of their teaching is perceptible in that of the schools at the present day. The principle of non-interference has been so skillfully embalmed in the axiom, "Meddlesome Midwifery is bad," that in our most recent works we find the propriety of it recognized as a thing indisputable, and have the question of the necessity of violating it most carefully discussed. And it is a well known fact, also, that the whole profession is pervaded by a certain ill-defined feeling of timidity regarding the use of instruments—that they are not proper or not safe—so that, generally speaking, they are religiously abstained from as long as possible. But in order that we may have the matter clearly before us, let us refer to the published opinions of some of our latest authorities on the subject. Dr. Collins, quoted by Dr. Churchill, observes: "Let it be carefully recollected, at the same time, that so long as the head advances ever so slowly, the patient's pulse continues good, the abdomen free from pain on pressure, and no obstruction to the removal of urine, interference should not be attempted unless the *child be dead.*" Churchill himself, writing in 1860, takes exception to this rule to some extent, and says that "when the second stage has lasted so long as to prove the inadequacy of the natural powers, or, at all events, as soon as the symptoms of a prolonged second stage make their appearance (quick pulse, dry tongue, fever, etc.), then we ought promptly to interfere." (Midwifery, 4th ed., p. 350.) Dr. Murphy, in the second edition of his work on Midwifery, published in 1862, sums up his observations on the use of the forceps thus: "When the head is passing slowly through the cavity of the pelvis, interference with the forceps is not called for, because of the *time* occupied, but rather because of the *special conditions* of the case. The use of this instrument is only justifiable when some clearly proved necessity arises; the time occupied in a labor is, *siepso*, no justification," &c. (p. 280.) Lastly, Dr. Hall Davis, writing in the present year, says: "So long as the head advances with the pains, and recedes on their retirement, the patient is safe from dangerous pressure on her soft tissues. If, on the contrary, the head has

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been *wedged in the pelvis in one position, under strong parturient action,* for five or six hours, we are bound, as a general rule, for the safety of the lives concerned, to extend our aid." (Parturition and its Difficulties, p. 72.)

These, then, may be taken as an example of the dicta of our authorities at the present time, and, I take it, as the exponent of the usual practice at present pursued. I shall hereafter, however, call your attention to some exceptions to this on the part of several practitioners, who, to some extent, follow the course I now advocate. But these, I believe, are the rules which would be endorsed by the vast majority of our comtemporaries in this country. We, therefore, find that we must do nothing whatever to assist a woman in an ordinary case of labor, not even though it may be lingering and tedious; but that it is only when we are absolutely compelled to do so, because of danger threatening the mother or child, that we may venture to interfere. (I leave out of consideration at present the use of ergot, because it is generally given without considering that the natural process is thereby influenced, and because it is frequently inert. No matter though the os uteri have been fully dilated for six or eight hours, and the child be still unborn, still, unless symptoms of inability or exhaustion present themselves, we are enjoined to wait on. Though the patient have been in strong labor for three or four hours after the rupture of the membranes, still, if progress be made at all, grave constitutional symptoms must have begun to make their appearance ere we should be warranted in interfering. Though we may have waited patiently near the bedside from nine in the morning till three in the afternoon, still neither does this matter. We must exercise our patience, and wait on still. Now, I would ask, why this reticence? Why this timidity? This is the point on which I am at issue with our authorities. Let me narrate a case or two, and apply the question to them.

Mrs. Smith progressed favorably till the os was fully dilated, when her pains began to come on less frequently, and the head entered the pelvis very slowly. Soon they died away altogether, and for half an hour no progress was made. A dose of ergot

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was then given, and not long afterwards the pains returned; but they were slight and inefficient. So they continued for an hour or more, when stronger pains set in, and in four hours from the beginning of the second stage the child was born.

Mrs. Jackson sent for her medical attendant at 8 a. m. On arrival he found the second stage fairly commenced, and pains coming on of fair strength and frequency. A speedy termination of the labor was considered probable. It was soon found, however, that the head did not make the progress it might have been expected to do; it advanced very slowly. Every morsel of ground was, as repeated examination showed, gained with great difficulty. Still the pains continued, one perhaps every five or ten minutes, and, on the whole, progress was made. The patient frequently complained, and begged for help, but was told that all was going on well. Ergot was administered without much appreciable effect; and it was only after three and a half hours' hard, continued labor that the delivery was completed. The child gave some difficulty in getting respiration properly established.

Mrs. M'Donald did well till the head was presenting under the arch of the pubes. Pains continued, but the head made no apparent progress. It came forward with each, but immediately receded to its former position when the pain passed off. This went on, more or less, for a whole hour in a very teasing manner, the attendant often mentally assuring the child's head that if he could only get hold of it with his fingers and thumb, he would make short work of it. This, however, he did not do. The patient became tired and querulous. The pains diminished in frequency, and for half an hour nearly stopped, when two good strong ones occurred, which expelled the child.

Mrs. Mackie was taken in labor of her first child early on Monday morning. Her attendant saw her several times during the day, and the first stage was completed about five in the afternoon. She continued to have good pains, and the head descended gradually to the perineum, occupying an hour and a half in doing so. The pains then left her, but recommenced in three-quarters of an hour. They continued pretty frequent and

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of good strength; but the tissues of the vagina were rather rigid, it being her first case, and it was only after another hour's continuous labor that the child was born. All along the patient exhibited great restlessness and anxiety, particularly during the last two hours. She tossed herself about and cried loudly for help, defying all attempts to pacify her, so that it was a matter of satisfaction to all when the labor was over.

Now, these are all cases such as we are constantly meeting with. A large proportion of our practice consists of such, or of others very similar. In all of them the natural powers are quite sufficient to complete the case, if we wait long enough, and the mother and child are daily reported to be "doing well." But, I would ask, why are we so terrified to lend nature a helping hand, when we see very well that she is in difficulty, and when so much suffering and anxiety are being endured? Why do we not step in and have the case easily finished in a few minutes, instead of allowing it to go on for two, three, four, or five hours? I go no further than this. I leave cases protracted for a third, or a half, or a whole day, out of the question, and would ask, Why allow any case to go on for the space of even *one hour* after the first stage is completed? Would it not have been more consonant with an intelligent perception of physiological facts to have supplied a substitute for the evidently too inert uterus in the case of Mrs. Smith, or to have helped it in its laborious efforts to overcome the evidently too narrow or rigid outlet in the cases of Mrs. Jackson or Mrs. Mackie? And would there have been anything very dreadful in the surgeon's carrying out his wish in the case of Mrs. M'Donald, by inserting a pair of "steel fingers," and bringing his tormentor into the world at once? I am unable to give a satisfactory answer to these questions, nor do I believe that it can be shown that the truest and soundest practice would not have been carefully to have finished the labor in each case by instrumental assistance.

No one was a firmer adherent to the policy of non-interference in midwifery than was I at the beginning of my professional career; and never did one act more honestly according to his creed than I. And yet, if such cases as I have narrated occurred

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to me now, I would assuredly use the forceps in each of them. I believe that there is far too much made of the danger of instrumental delivery. Women have the idea that it is something by all means to be preserved from; they speak of some friend having been delivered instrumentally, in an under-tone; they get flurried in the lying-in-chamber when the subject is mooted. Medical men, too, to a large extent, share in this feeling, and in some degree it is quite justifiable; for instruments are so rarely used till pathological symptoms have manifested themselves, that we must conclude that, when they are proposed, the patient is in some danger. I believe, on the contrary, that with proper care and undivided attention, the forceps are a most *harmless, safe, and altogether admirable adjuvant in every day obstetric practice.* As such I would strongly recommend them, and to do my endeavor to uproot the strange idea that we are bound to leave our patient to her own efforts till her safety is endangered, and to some extent to save suffering is the object of this paper.

Since my practice was influenced by these views, I find that, in the last 100 cases I have attended, I have used the instrument so frequently as in 28 of them, or about 1 in every 3½ cases. In 5 of these cases the head was still above the brim when I applied the instrument. I can also recall some in which I was only prevented by questions of policy from having recourse to it. To say this, of course, is to say that I rarely go to a case of midwifery without taking the forceps with me. I do not use them to obviate danger, but to abbreviate anxiety and pain, and because I am convinced that I can do so with perfect safety. If there appears to me the slightest hindrance to the ready passage of the head, either from narrowness of the canal, or deficient uterine action, I make no hesitation about the matter, but apply the forceps, and finish the case. Of course, one has to be guided in his mode of manœuvering by the character of the patient; for, although we may often enough be entreated by herself to give her assistance, still this is not the most common case we meet with. Many have had natural labors previously, and see no reason why they may not again; and then, also, the firmly-rooted pre-

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judice has to be contended with. It is thus sometimes necessary to explain everything, and have full permission; while, in other cases, I have used the instrument without the patient's knowing anything about it till extraction was being accomplished. Let it be done calmly, and with great deliberation. There must be no "fussiness" about it, but it must be made quite light of, as if a matter of every day occurrence. It is a good plan never to let the blades come in contact with each other outside the pelvis, so that the metallic noise, always so disagreeable to a patient, may be avoided. I therefore carry them in a bag, with a compartment for each blade. If short forceps, such as Simpson's modification of Ziegler's, are used, which do very well when the head is just at the outlet, the whole operation can be accomplished with the utmost quietness and ease. Generally, I prefer Simpson's combined long and short—partly because they suit any case, and partly because I have become accustomed to them. I have only to complain of their bulk and their weight.*

It is necessary, however, that we should notice certain *objections* which may be brought forward against such frequent use of the forceps as I here advocate. First of all, certain *dangers* are said to be incurred by their use—such as that the *soft parts of the mother may be injured* in their introduction; that the *perineum may be lacerated;* that, by withdrawing the child too rapidly, *the uterus might not contract properly.* Now, with regard to the risk of injuring the maternal passages, I believe there is a great deal of misconception. We have been taught that forceps are dangerous, and believe it, without testing the truth. Undoubtedly, if reserved for labors in which the head is impacted in the pelvis, and the tissues have become swollen and inflamed, or in which the patient is otherwise in a state to give rise to anxiety, there may be danger, either real or apparent, from their use. In such cases, I can readily understand that it may be a difficult matter to introduce the forceps without some amount of bruis-

*Mr. Young, of Edinburg, has described to me a modification of these, which he has devised. The shank is in two pieces, which dovetail into each other. Union is made complete by means of a ring, which passes over the place of junction. These may obviate to some extent the former objection. The instrument was alluded to in a recent number of this Journal.

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ing, or that the dragging of the child through the narrow and inflamed passage may produce mischief; and I can, to some extent, sympathise with Dr. Davis, and the authors I have quoted, in their doubt as to whether the case should be further left to the natural efforts, or be treated by the forceps or by the crotchet. But I am altogether at variance with them as to the propriety of allowing such states to supervene. *The head ought never to become impacted nor the tissues swollen.* If this be guarded against and the forceps be used while there is abundance of room, then I maintain that there is absolutely no danger from their skillful employment; and I might appeal to the recorded testimony of many writers in corroboration of this, and to that of any one who has used them in such circumstances. Using the forceps in natural labor, and using the forceps in protracted labor, are two entirely different things; but almost every writer has shut his eyes to this consideration. With the latter condition I have at present nothing to do.

No doubt it is quite a possible matter to push a blade through the vagina, or to take hold of the cervix uteri as well as the child's head, but such mishaps must not be attributed to the forceps. The responsibility lies at the door of the operator. The simplest procedure may clumsily become the cause of death. "To reason that such effects are the necessary concomitants of the forceps is very much the same as it would be if we were to say that, because, in the operation of lithotomy, nervous or inexperienced operators have cut deeply into the rectal pouch, and becoming confused, have not been able to open the bladder at all; therefore that the operation for stone is one which ought not to be performed." (Mr. Harper, in paper alluded to.) And yet, although a certain amount of neat-handedness is desirable in all surgical procedures, I can not think that any unusual dexterity is requisite for the safe use of the forceps. It has always appeared to me so perfectly simple that I am at a loss to understand how such unfortunate accidents can have occurred. Yet a few are on record. Are our teachers not to blame? How many students are taught how to use their hands?

That the perineum is liable to be ruptured is one of the most

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frequent objections. As far as my own experience goes, I can not admit it as one. It is true that in one case which impressed itself on my mind at the time, the perineum was injured to a considerable extent, but this was owing to the neglect of the precautions necessary to obviate it. The perineum must always be well supported, and great care must be taken to turn the handles of the forceps well over the pubic arch during extraction. On no account should traction be made in the long axis of the body at this stage. In the case referred to, the patient was very restless, and I, being somewhat hurried on this account, failed to bestow proper attention on these points. The perineum was long, and would undoubtedly have given way even had I not interfered, but I imagined that I had made it worse than it might have been. In no other case—and I occasionally make an examination on purpose to ascertain this matter—have I met with more than the slight tear which, as Sir J. Simpson has shown, is the usual accompaniment of natural labor. This latter fact must be borne in mind, for, if after using forceps we find the perineum has lost its integrity, the instrument must not therefore be necessarily blamed. I am not sure that straight forceps are not objectionable on account of a risk of this accident. The posterior corner of the point may project beyond the head, and, in turning them over the pubes, this may press injuriously on the already tightly stretched tissue. With curved forceps this is impossible.—*Edinburg Medical Journal.*

REPORT OF THE COMMITTEE ON THE PROPHYLAXIS OF SCARLATINA AND RUBEOLA, TO THE EAST RIVER MEDICAL ASSOCIATION, JULY 2, 1867.

Dr. Skiff read the following report, which was signed by all the members of the committee, and which was subsequently adopted as the sense of the meeting:

Keeping within the province of the subject sketched out, it will answer the purpose of the committee to consider such characteristics as are common to both measles and scarlatina. In compliance with this plan, and adopting the hypothesis

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most generally entertained respecting the matter of contagion, and the miasm of infection, we observe:

1. Measles and scarlatina are incident to childhood, but may occur at any age.

2. That having occurred once, they constitute an immunity against an attack of the same disease.

3. That they are each caused by a miasm extraneous to the human body, and portable by means of fomites.

4. That they are not inoculable, or preventable to any extent by substituting a less fatal or less infectious disease.

5. That they are not peculiar to any social condition of society;—the malign or non-malign characters being mostly dependent on a more or less pernicious epidemic, the peculiar condition or idiosyncrasy of the individual attacked, or the complications which may occur in the course of the disease.

6. That they are self-limiting diseases.

7. That the fatality seems to depend more on the virulence of the particular epidemic than the amount of miasmic infection entering the system.

The committee concluded that:

1. Measles and scarlatina, though originating from causes extraneous to the body, are so commonly prevalent that they are naturally diseases of childhood, but are nevertheless incident to any period of life. As, then, there is no certain exemption from these diseases, it would seem desirable for prudential reasons that they should be contracted in infancy, while the child is surrounded by parents and friends who can supply the adequate nursing and attention.

2. It is evident that if every case of measles and scarlatina could be completely isolated from the non-infected, and all healthy persons forever unexposed to the poisonous infection, the diseases in question would become extinct. But although this is impossible, the other extreme of allowing a virulent epidemic to prevail without the opposition of the humanitarian or physician would be unreasonable—nay, more, unnatural. The happy mean challenges our attention as at once practical, philosophical and charitable.

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So then, since a mild form of either measles or scarlatina is a conservator as effectual as the most malignant against a second invasion of the individual, the indications are to avoid the more malignant, if practicable.

3. Practically, the idea may be elaborated thus:

a. Isolation should be enforced in the case of patients suffering from any disease but ill-calculated to bear any additional burden. To these may be added a sub-class of pregnant women.

b. In a serious epidemic, the infected should be isolated from those who have not yet been attacked; to this plan may be added, thorough ventilation, cleanliness, and the use of disinfectants.

In the investigation of the subject under consideration, the committee called upon Dr. Elisha Harris, Secretary of the Board of Health, and received in reply to their questions the following letter:

"OFFICE OF THE METROPOLITAN BOARD OF HEALTH,
"No. 301 Mott street, New York, June 5, 1867.

"In reply to the questions—

"1. What sanitary measures are now adopted and suggested by the Board of Health to prevent and to mitigate scarlatina, small-pox, and measles?

"2. What is recommended to the physicians who have patients with these diseases? the following statements are submitted as embodying, in an unofficial form, all the facts on the subject, so far as the officers of the Board have given advice or orders relating to these diseases:—

"*a.* The persons sick with any of these diseases among the poor or ignorant classes should be kept isolated entirely from all except the members of their own families or nurses.

"Generally it is expected that a person sick with small-pox or varioloid must be sent to the Small-pox Hospital, on Blackwell's Island; and upon most such cases the Sanitary Superintendent issues his official order for the transfer of the sick person.

"*b.* The sick rooms and all that pertains to them must be kept *constantly ventilated*, and the fire-place be kept open,—

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occasionally or constantly having a little fire in it, if there is such a fire-place.

"*c.* Fresh chloride of lime or flasks of fluid carbolic acid are advised to be kept in the room, placed in secure position.

"*d.* Every article of personal clothing and bedding that has been in contact with the sick person should be placed in boiling water, or in a solution of some positive disinfectant—such as solut. permang. potassa (4 3 to two or three galls.) or one of the chlorine solutions. The same dilute solutions of the disinfectants should be sprinkled about the rooms where the sick lie, or, what is better, they may be evaporated from wet clothes suspended. This practice is recommended where there is an epidemic in a crowded population.

"*e.* The cleansing of the houses and premises where any such infectious disease has prevailed is also important. Whitewashing with fresh-slaked lime, or with chloride of lime; scrubbing floors and all woodwork and hard walls with hot solutions of chloride of lime; and the keeping of windows and doors open for several days, are the chief measures.

"This practice is now applied to diphtheria, typhus, typhoid, "spotted fever," and cholera; but the few cases of spotted fever hitherto seen are not supposed to have been infectious; they were surrounded by localizing sources of disease.

"(Signed) "E. HARRIS,
"Cor. Secretary Metropolitan Board of Health."

In conclusion, the committee would make the following practical suggestions:

1st. That during an ordinary epidemic of measles or scarlatina, no sanitary measures, except ventilation and cleanliness, should be employed.

2d. That during a severe epidemic of these diseases the following sanitary measures should be adopted:

A. *Isolation.*—The patient should be placed in a room apart from the rest of the family, and attended by a person who has had the disease—no communication being allowed with the rest of the family.

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B. *Ventilation* and *Cleanliness.*—The windows of the room should be kept constantly open, and whenever practicable a fire in a fire-place, with a view to add to these means, should be constantly maintained.

The most thorough cleanliness should be insisted upon—and bed-linen ought to be changed as often as practicable.

C. *Disinfection.*—Every article of personal clothing and bedding once in contact with the patient should be steeped in boiling water, or in a solution of the permanganate of potassa (1 oz. of the permanganate to three gallons of water).

The chamber vessels should be disinfected by a solution of sulphate of iron and carbolic acid.

D. *Fumigation.*—After patients have recovered, the room in which they were sick should be vacated for at least twelve hours,—every window and aperture closed, and upon an iron pipkin or kettle with legs burn a few ounces of sulphur.

Let the room be kept closed for eight hours and then ventilate thoroughly.—*New York Medical Record.*

A NEW TREATMENT OF LEAD POISONING.

[Translated from the Gazette des Hopitaux.]

By W. F. Mumma, M. D.

In a recent clinical lecture, Prof. Monneret, of the Paris Medical School, gave the following exposition of his peculiar treatment (cold intus and extra) of lead poisoning.

Of all poisonings, that by lead and its salts is the most frequent. It is not my intention to-day to describe the different phenomena of this intoxication; I shall only say that they are very varied, and come on sometimes slowly, sometimes rapidly. In the first place, the workmen experience vague abdominal pains. Then there are troubles of the sensibility and motility, commencing in feebleness and ending in paralysis. After a certain time the abdominal colics become very violent, and are

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accompanied by obstinate constipation. This increase in the intensity of the colics is often due to excesses in drinking, which are usually denied by the patients.

Like other physicians, I had always treated these accidents by the free use of evacuants, when, some eight or nine months ago, the idea of a rational treatment suggested itself to me, based upon the supposition that the principal symptoms are due to an affection of the sensitive and motor nerves. This treatment was by the application of cold, *intus et extra*. Cold, as is well known, either directly or through the capillaries, has a great influence upon the nervous system and thus upon the secretions. For this reason I was led to inquire whether the sensibility and secretions of the intestines could not be modified by the action of cold as well as by that of the evacuants which I, in common with others, had always employed. The experiment being a harmless one, I was perfectly justified in making it; and, in addition to this, I was confirmed in my ideas by the success of an analogous preventive treatment by hydrotherapy as followed, under my directions, in one of the Clichy workshops. I myself, in my own service, have used this treatment in more than forty cases of workmen showing the early symptoms of lead poisoning, and have found it sovereign.

As soon as I see the patient I order him some iced drink, lemonade for example, occasionally adding a little wine. At the same time I order three cold-water injections daily, the water to be retained in the rectum as long as possible. In addition to the cold drinks and injections, the patient is submitted to hydrotherapy morning and evening, and, in some cases, a shower-bath is given at noon. This may be from a hose-pipe or the ordinary shower-bath, and should never last more than a minute. The action of this douche is not simply refrigerant, but is much more profound and general, stimulating the capillary vessels, which contract, at first, driving back the blood, and then expand, allowing a free return. Sometimes the action of the glands is increased, and a light perspiration covers the body. These effects of hydrotherapy, upon which I hope to dwell

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longer at another time, are very manifest and very active, and one can understand that the activity of the tissues is renewed. To these different means I add a cold poultice, in order to maintain a constant refrigeration. And, in this connection, let me teach you what I was ignorant of for a long time—that is, the way to make a cold poultice. Take a large linen or cotton cloth, and on it spread a layer of linseed meal half an inch thick. Upon this place pieces of ice about the size of a hen's egg; then add another similar layer of meal, and fold the cloth over so as to enclose the whole. Apply this to the abdomen, and the gradual melting of the ice keeps up the influence of the refrigeration for some three hours. This powerful agent I employ, not only in lead colics, but in all cases in which such action is indicated (such as typhoid fever and peritonitis, for example), and greatly prefer it to the application of ice in bladders, which is sometimes intolerably painful to the patient. By the treatment just described the most speedy results are obtained, and I have seen the disease entirely cured in from two to seven days. In the forty cases observed by me, with two exceptions, all the symptoms of nervous trouble have disappeared as if by enchantment. The progress toward cure is this: during the first three days the constipation persists, and the injections are returned as they were given; the pain, however, disappears. On the fifth or sixth day, the fæcal matter, more or less softened, is rendered naturally, and the cure is complete.

For a long time this treatment appeared so simple that I regarded it as purely palliative; to-day, however, I consider it a powerful curative agent, acting upon the capillary and vasomotor systems, and putting in play the natural secretions and excretions, thus aiding the organism to free itself from the poison which has manifested itself by a profound disturbance of the nervous system. It is by restoring to this its activity and molecular action that cold is curative to such an extent.—*Boston Medical and Surgical Journal.*

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THE MEDICAL REPORTER.

ST. LOUIS, OCTOBER 1, 1867.

DEATH FROM CHLOROFORM.

The following interesting communication from Prof. John T. Hodgen gives the details of a death from inhalation of chloroform. This is the fourth case of the kind occurring in St. Louis from the same cause. All the ordinary care and precautions were used in the present case, and every effort taken to induce recovery when the condition of the patient was discovered, but with no avail. The question is thus again opened as to the propriety of the use of chloroform in surgical operations; and even with the present case before us we still think its use desirable and justifiable, when we take into account the innumerable cases in which it is used with perfect impunity and safety. The few fatal cases are hardly to be taken into account, except it be to promote more than ordinary care in procuring a pure article of chloroform for inhalation and the enforcement of extreme caution in its use:

"SAINT LOUIS, September 25, 1867.

Editors Saint Louis Medical Reporter—

"It becomes my duty to record another death from the use of chloroform as an anæsthetic agent—the first I have ever witnessed—and I think the fourth case of the kind that has occurred in this city since it has been presented to the profession for that purpose. Jacob Wilhelm, aged 59, a native of Germany, of original robust constitution, but who had suffered much during the past seven years from stone in the bladder, presented himself to me two weeks ago asking to be operated upon. At that time, though we found stone, it was thought prudent to put off the operation a short time, since he was suffering from malarious fever, and the weather was very hot. Yesterday, (September 24) however, his general condition having sufficiently improved, he was, at 10 o'clock A. M., brought to the operating-room of the St. Louis (Sisters') Hospital, and was placed upon the table for the purpose of having the operation

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of lithotomy performed. In the presence of some thirty medical men and students, assisted by Drs. Gregory, Dudley, Junghaus and others, chloroform was administered in the usual way, viz., a drachm of chloroform was poured into a conically folded napkin, and the patient allowed to breathe from it; of course, inhaled in this manner, it is largely mixed with air. He was announced under its influence, and I made the first incision in the perineum. In searching for the staff, the patient seemed not well under the influence of the chloroform; a little more was added to the napkin, and he took two additional inspirations, when his condition was announced as critical by the attendants. Efforts were immediately made to resuscitate him by dashing cold water in the face and on the chest, violent spanking, striking the chest, and pressing the abdomen; and finally, by opening the windpipe and introducing a large catheter, fresh air was forced into the lungs and endeavors made to produce artificial respiration. These efforts were continued for over a half hour, but did not elicit the slightest response, and the patient succumbed almost instantly.

"Respectfully, JOHN T. HODGEN, M. D."

REVIEWS.

THE INDIGESTIONS; OR, DISEASES OF THE DIGESTIVE ORGANS FUNCTIONALLY TREATED. By T. K. CHAMBERS, honorary physician to H. R. H. the Prince of Wales. Philadelphia: H. C. LEA. 1867.

We have read this work with much interest, as well from the desire to gather information on a subject with which every practitioner has most to do, for there is no question that the diseases of the digestive organs are most frequent in the Western country at least, as to compare our mode of practice with that of the old country. We are well pleased with this work as to its mode of treating the subject; the material is gathered at the bedside, and the reflections on the cases, which are numerous, are well calculated to arrest the attention and afford food for much profitable reflection. The volume is made up of nine chapters, each of which treats of some one symptom of abdominal derangement; but as abdominal pains, vomiting, flatulence,

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diarrhœa, &c., that oftentimes are a source of annoyance to the physician, from the mere fact that they are overlooked in the cause of disease as of very minor importance, as insignificant in fact, or else their true import is not understood, and the patient is ultimately not relieved. Such a work as this affords pleasure, because it is a transcript of what actually occurs, and not the result of work carried out in the study. We can refer to it as a source whence much valuable information can be obtained, and would recommend it to the profession as a hand-book, to which they can apply when wearied with the monotony of their own thoughts or fatigued with their daily labor.

ELEMENTS OF MEDICAL CHEMISTRY. By B. HOWARD RAND, M. D., Professor of Chemistry in Jefferson Medical College. Philadelphia: T. ELLWOOD BELL & Co. 1867.

We have been much pleased with the examination of this hand-book of chemistry. It is intended more particularly for medical students, though answering very well for the practitioner as a book of reference. In fact, it is a copious set of notes of the author's lectures, and though not entering deeply into the subject of chemistry, proceeds so far as to give sufficient information to read understandingly more elaborate works. We commend it to the student as the best *vade-mecum* we have yet seen.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF KANSAS.

In reference to our own State, if not from its intrinsic merit, we can not refrain from noticing the above pamphlet. The transactions are of interest; the excellent address of the President, Dr. C. A. Logan, and his report on Obstetrics; the report on Surgery, by Dr. M. Bailey; the report on Climatology, by Dr. T. Jinks, are characterized by ability; the various essays on the use of water as a therapeutic agent, on Diphtheria, on Malarial Miasm, on oblique fractures of the Vertebra, on persulphate of iron in Hemorrhage, the cases of poisoning by Arsenic, and operation for Female Hernia, display an energy and enthusiasm in what used to be a border State, which we would do well to imitate.

The Leavenworth Medical Journal, also, which we were pleased

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to add to our exchange list, is fully up to the times, and compares very favorably with much older publications.

We make these remarks as expressive of our gratification at the activity of the profession in Kansas. We are active here in our peculiar way, but we desire to see more expansion of feeling among our fraternity. We believe County and State Societies will effectuate it.

The St. Louis and Missouri Medical Colleges open their halls to-day, October 1, for the Winter Session. The classes already gathered are respectable in numbers and appearance, and seem earnest in their endeavors to pursue the course marked out for them. These two schools still adhere to the old system of five months' session. What their action will be in response to the call of the Committee on Medical Education, appointed by the late Convention, another session will probably develop. It is premature now to act; nor would we wish to see any action in the matter until after mature deliberation. These great changes can not be made immediately, whether we consider the welfare of the schools or the students. The subject of medical education is a delicate matter to treat, and we question whether we have advanced far enough in the world's progress to cope with it.

The American Naturalist.—We would again call the attention of our readers to this really valuable publication. No scientific journal has ever been published in the United States which is so thoroughly adapted to the taste of all kinds of readers. The professional man, the scientific engineer, the mechanic and the farmer, all will find matter of great interest and instruction. The article on the "Home of the Bees," by the editor, is alone worth double the subscription price. Specimen copies can be seen at our office. We thank the editors for the use of the plates so kindly furnished us for illustrating Mr. Tilbury Fox's article on the Chignon.

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THE SAINT LOUIS
MEDICAL REPORTER,
A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, OCTOBER 15, 1867. No. 16.

RIGID PERINEUM.

By G. HURT, M. D., St Louis.

[Communicated for the St. Louis Medical Reporter.]

The article on rigid perineum, in No. 14 of the *St. Louis Medical Reporter*, by Dr. Beatty, quoted from the proceedings of the Dublin Obstetrical Society, is interesting, both on account of the suggestions of the author, and the great practical importance of the subject of which it treats.

All admit that laceration of the perineum is a serious accident, and when threatened is calculated to fill the mind of the *accoucheur* with feelings of the most painful anxiety. I have never witnessed the accident, but have often experienced the anxiety which the anticipation of it awakens, in labors which have been protracted for many hours after the fœtal head had emerged from the bony strait. I have often had occasion to reflect upon this subject, and though willing to admit that rigidity of the soft parts is usually the primary and efficient cause of the delay at this stage of labor, yet I doubt if it is always the cause of laceration when that accident occurs. For in several cases which have come under my observation, in which laceration of the perineum appeared imminent, the danger did not seem to be so much in consequence of the rigidity as of the relative position of the fœtal head in soft parts. Owing, perhaps, to some peculiarity in the anatomy of the soft parts constituting the floor of the pelvis, or of the pelvis itself, or of the pos-

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tion of the fœtus in utero at the time of parturition, the posterior wall of the vagina sustains the almost entire force of the uterine paroxysms, and is thus carried down in front of the fœtal head toward the perineum, and relaxing, permits the weight of the head to rest upon the posterior margin of the perineum; while, at the same time, the vulva, from want of antagonism, ascends toward the pubes, so as to place it entirely out of the line of the distending force; and while the sphyncter ani muscles are being rapidly and freely relaxed and dilated, those of the vulva are but little disturbed. It is in these cases that laceration is most to be dreaded, from the fact that it commences at the anus and inflicts a dangerous and irreparable injury.

Now, in these cases, the *accoucheur* may render valuable assistance by passing two fingers of either hand (as the position of the patient may require) into the bowel, and with their palmer surfaces supporting the posterior wall of the vagina, and by a gentle and steady upward pressure direct the fœtal head towards the vulva; while, at the same time, the thumb is pressed against the perineum so as to check further distention, and, at the same time, to depress it so as to bring the vulva more fairly within the axis of the distending force. This has been my practice in a number of instances, and so satisfactory were the results that the dread of laceration seldom haunts me now as it did of yore.

This practice may be regarded by some as indelicate, but I can assure those who are disposed to take this view of it, that in a case of real danger, such as we are supposed to be considering, the objection can not be considered, and their patients will be more apt to thank than to chide them for their well-timed interference; and in cases where the danger of laceration really exists (and none others ought to be interfered with), the anus will be found to be sufficiently dilated to admit the entire hand if it were necessary, and the assistance can be rendered without the slightest inconvenience or discomfort to the patient.

The important indication in these cases is to bring the expanding force of the fœtal head in opposition with the vulva,

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so as to act with energy upon the constrictor muscles of the vagina, which is to be accomplished by elevating the head and depressing the perineum. For if the head continues to advance in the direction of the lower margin of the perineum, scarcely any amount of dilation or expansion can relieve the patient from the perils of a dangerous laceration.

HOSPITAL REPORTS.

SURGICAL CLINIC AT THE ST. LOUIS (SISTERS') HOSPITAL, SERVICE OF PROF. E. H. GREGORY, OF THE ST. LOUIS MEDCAL COLLEGE.

[Reported for the St. Louis Medical Reporter, by T. Fox.]

CASE 1. *Removal of an Insect from the Ear.*—A lady presented herself at the Clinic with a foreign body in the ear, which she considered to be an insect. Injections of warm water were first resorted to, without avail. Being placed under the influence of chloroform, it was removed by the forceps. It proved to be an insect, and the reason of its resisting the repeated injections of water was now apparent, as the rough points by which its limbs were armed inserted themselves into the structures of the part, and prevented it from being carried away. In speaking of this case, Prof. Gregory said: "In the removal of foreign bodies from the auditory canal, it is important to keep two facts in mind: 1st, not to injure the structure of the parts; and 2d, when the foreign body is soft, not to use too much pressure upon the forceps, else the body will be broken up, and only that part extracted which is included between the blades of the forceps.

CASE 2. *Fracture of the Internal Condyle of the Humeris, with Dislocation of the Radius Backward and Outward.*—John G. ——, aged 12 years, was brought before the class, for dislocation of forearm, which was said to have been reduced. From the painful and œdematous condition of the limb, it was impossible to make a thorough examination without placing the patient under the influence of chloroform, which was done. The head of the radius was very prominent; the cup-shaped depression upon its head could be distinctly felt, on pressure. The loss of prominence of the internal condyle was very marked, it being drawn

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downward by the action of the flexor muscles, so as to be on a level with the plane of the humeris. Crepitation could be distinctly felt. The arm was bent in that position which would be most favorable should anchyloris take place, and placed in an angular splint. Not connected with the above, but at the same time, Prof. Gregory called the attention of the class to the manner of treating fractures of the forearm. The splints are marked out by the round arm, and made of a width corresponding to the width of the limb. By this mode the splints support the bandage, and prevent its pressing the muscles and bones toward the interoseous space, which would be the case if narrow splints were used.

Case 3. *Varicocele.*—James Stinson, aged 20 years, was presented before the clinic by Prof. Hodgen, who, being assisted by Prof. Gregory, operated upon him for Varicocele, by Woods' method, which is as follows: The vas defferens, which is known by its hard, wiry feeling, is seized between the thumb and forefinger, and excluded from the veins. Then a needle, with an eye in its point, is passed through the walls of the scrotum, armed with a wire and withdrawn, carrying a loop of wire with it; a larger wire is then passed through the same opening, its point carried along the walls of the scrotum, so as to include the veins, and made to emerge at the first opening. The smaller wire is then looped over the larger one and twisted upon it. The veins are thus included between two wires, and twisted upon them, this being equal to their ligation at many points. The advantage of this is, that the ligature can be removed at any time, by untwisting the smaller wire.

The *Hebrew National*, a new weekly journal, published in London, gives some interesting statistics of the Jewish race. It says there are now about 6,000,000 Israelites, half of whom live in Europe: In Russia 1,300,000; Austria, 600,000; Prussia, 254,000; other parts of Germany, 192,000; France, 80,000; Switzerland, 8,000; Great Britain, 42,000; Syria and Asiatic Turkey, 52,000; Morocco and North Africa, 610,000; East Asia, 500,800; America, 250,000; Belgium, 1,800; Denmark, 6,500; Italy, 4,500.

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THE DECADENCE OF THE AMERICAN RACE, AS EXHIBITED IN THE REGISTRATION REPORTS OF MASSACHUSETTS, VERMONT AND RHODE ISLAND—THE CAUSE AND THE REMEDY.

[A paper read before the Vermont Medical Society at its semi-Annual Session in June, 1867, by L. C. BUTLER, M. D., of Essex.]

The registration reports of Massachusetts reveal the fact that the natural increase of the foreign population, in that State, is considerably greater than that of the native or American population. In a report made to the city government of Boston, it is stated that the whole increase of population in that city, for the years 1849 and 1850, from the excess of births over deaths, was among the foreign population. Since that time, Dr. Allen, of Lowell, thinks it will be very difficult to prove that there has been any *natural* increase of population in that city with the strictly American portion. And the same writer suggests that with the present increase of that element and the stationary condition of the original stock, it will be but few years before the principal cities and towns of that State, if not the Commonwealth in all its departments, will contain a majority of those born of foreign parents.

The registration reports of Vermont reveal the same condition of things in a lesser degree. In a foreign population of a little more than per ten cent. of the whole, or almost nine Americans to one foreigner, the ratio of increase is more than three of the latter to one of the former. A general census of the city of Burlington, recently made, shows the foreign population largely in the ascendant, and it can scarcely be doubted that if the census-takers had descended into the minute particulars of births and deaths, it would have been found that the *natural* increase of the population was among those of foreign descent. So also in Rhode Island. The thirteenth registration report shows that in that State, in 1865, there was one child born of American parentage in 60.2 of the total population, and of foreign parentage one in 33.7; and that in ten years the gain of population, by excess of births over deaths, has been of American 4.4 per cent., and of foreign 19.1 per cent. In the city of Providence the females of foreign birth, married, and in the

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child-bearing period of life, had nearly twice as many living children, in proportion to their numbers, as those of American birth.

These facts have given rise to the inquiry, what will be the condition of society twenty-five, fifty, or a hundred years hence, if this preponderance of the births in favor of foreigners shall continue? It also suggests the inquiry as to the *cause* of this continued and marked increase of the foreign birth-rate over that of the American, and the proper remedy to be applied.

The former of these inquiries I do not propose to discuss. I leave the question for theologians and metaphysicians. Upon the latter, viz., the *cause* and the *remedy*, I will offer a few suggestions which may throw some light upon the diagnosis and the therapeutical indications.

Any person who has glanced over the columns of the secular, and, to some extent, the religious press of the day, can hardly fail to have noticed the increase of a class of advertisements addressed to "the married, or those about to marry," "to ladies only," &c., &c., proposing to give instructions how persons may have, or avoid having, a family, how they may enjoy all the sensual gratifications of married life without increase, unless they specially desire it. There are, also, advertisements of "Golden Pills" and "Female Regulators," which are warranted to correct all "female irregularities," and "to remove all obstructions." Though the editors of these papers would blush with shame to print in their editorial columns the obscenity and indecency which they admit as advertisements, still very few have the stamina to reject them. Some papers are almost entirely devoted to them.

Whence is this? The demand among the people requires it, and the very fact of advertising creates a demand for the information promised. The louder it is heralded, and the more ridiculously absurd or extravagant the pretensions, the more eagerly it is sought after. The demand regulates the supply, and, taking the increase of these nefarious advertisements as the criterion of our judgment, the demand must be alarmingly

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on the increase. That these advertisements are read, there can be no doubt. Common curiosity would lead to that result.

Again, if you go into any of the stores or drug shops of the country, even in towns quite remote from the centres of business, and among a class of people whom we should think most unlikely to seek after or require such articles of merchandise, you will find "Golden Pills," "Female Regulators," &c., everywhere exposed for sale. And the sales are oftentimes prompt, rapid and large. There is a demand for them, and it is increasing, as every merchant and druggist will tell you if you ask him the question. Why is this? Through the medium of the post office every neighborhood is flooded with "private circulars" or "special notices," addressed indiscriminately to young and old of both sexes. These circulars are ostensibly intended "for married people only, or "for ladies only," but the taking title gives the idea of some "secret worth knowing," and so they are "privately" read by the whole family; and, charmed with the idea of "golden pills" for the cure of human ills, or of a "regulator" which "regulates" all "irregularities" and "removes all obstructions," the husband or son is "privately" posted off to the store or drug shop to obtain this rich boon, which is to make themselves "as gods, knowing everything." And these nostrums are used. As physicians, we have occasion to know it, to our own sorrow and the overwhelming sorrow of our patients. We see it in the shattered constitutions, the pale, ghastly faces, betokening the presence of inward disease which no human remedy can reach. We see it in the feebleness of future life, which years of medicine and repentance can scarcely overcome. We see it in the appalling revelations of the post mortem examination, by which we are enabled with the naked eye to trace its progress through the various stages of inflammation to the fatal end. We see these results and know their cause. And we sound the warning note against them; but, like the bird which has come within the charmed circle, people who are accounted rational on all other matters, here seem to have lost all power of reflection, and rush madly on to inevitable destruction.

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But further. Years ago it was not uncommon to see families numbering 5, 8, 10, 12, and even 15 children growing up under the paternal roof. The patriarchs of old were the progenitors of large families, and to be childless was reckoned so great a calamity among the Jews as to demand special prayer that the judgment of heaven might be averted. All along down from that period until within the memory of many of us who are here to-day, to have no children has been regarded as a calamity to be deplored rather than a blessing to be desired. Later years have wrought a change in this sentiment, and the average size of families has been gradually diminishing, till now there are very many households where there are but one, two or three children.

From the records of several of the oldest towns in Massachusetts, it appears that the first generation had an average of eight to ten children to a family; the next three averaged seven and eight; the fifth, five; and the sixth, less than three to each family. No doubt the records of the longest settled towns in our State would show nearly the same results. And so the average has been gradually lessening among families of American descent, till the startling fact has given rise to the question, whether the American race is not destined to run out. Whence has arisen this remarkable change? Not from inability to procreate or to bear children, we are sure. We know no reason why as a race we are not as vigorous in this respect as our ancestors. Climate, habits of living, demands of society, disease, may have wrought changes in the system, but still these have not produced such degeneracy of the race as to indicate the loss of reproductive power, or that puny progeny would be the result. Formerly child-bearing was considered to be the natural consummation of wedded bliss; a result so certain to follow, provided no organic obstruction existed, that no means could prevent it, and none were desired. Now-a-days it is not so. We can not say that the happy couple whose mutual love has been mingled at the marriage altar will ever fulfill the scripture injunction, "multiply and replenish the earth." They may and they may not. The obligation sits loosely upon them, and is easily thrown

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off. Society has claims upon them. Instead of the retirement of domestic life, woman must now mingle in public affairs. She must occupy the pulpit, the forum, the rostrum, the stump. She must answer the demands of sociability by visiting, travel, social parties, the dancing hall, the street, the places of public amusement, the whirl of fashion. These are inconsistent with the condition of pregnancy. One or the other must give place. And since the spirit of the age indicates that woman may occupy a different sphere from that in which she has formerly moved; and since all the public pursuits and offices hitherto held exclusively by man may yet be the objects of her ambition, she should not be compelled to exclude herself from the excitements and annuities of social or public life. And then again, they reason the expense of raising up families is greater now than formerly. The greater the number of children the greater the expense, and it can not be endured. The closest economy now is required to save us from poverty or the poor house. The toils and trials of a family are too severe and burdensome.

The result of this reasoning and much of a similar nature is, that it becomes a matter of study, how shall we avoid suffering the pains and penalties of child bearing? To answer this question, some resort to the advertisements and circulars to which we have alluded, procure the means recommended, and use them whenever pregnancy is suspected. A correspondent of the *Medical and Surgical Reporter*, Philadelphia, relates the case of a woman who rode twenty miles in a lumber wagon with a view to produce miscarriage, but failing in this, resorted to a wire which she kept for that purpose. She stated that many women of her acquaintance used the same means to prevent increase of family. Remonstrance against the practice was unheeded, and although suffering severely from the effects of her attempt, she besought the doctor not to give her anything to "stop it." The same correspondent relates another case where the husband of a woman, pregnant nearly three months, had occasionally used the wire for the same purpose, having been instructed how to use it, he said, by a "doctor out west." The attempt to introduce it gave her much pain, and produced a tumor of the cervix,

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which extended into the body of the uterus. This operation had been resorted to several times, with nearly a fatal result each time. Other like instances may have perhaps occurred in the observation of every physician present, but these are sufficient for our purpose.

Other persons of this class, fearing the results which may follow the use of such means when applied by themselves, apply to the physician to become a party in the work of destruction. These applications are not only numerous, but fearfully increasing in number. Almost every physician is importuned to engage in the nefarious business. Some, alas for poor human nature! despite the enactments of law and the chidings of conscience, make it a part of their regular practice. The applications come in many cases from intelligent, high-minded women; from those who would shrink back with horror from the commission of even the most insignificant offense. They come in such form and with such imploring importunity, that it is difficult to resist. The fees are large, and no credit is given or required. If the physician has moral, or religious, or legal scruples in regard to the matter, and attempts to reason or argue with the applicant, to dissuade her from the act, she will reply, perhaps, as one, we are told, actually did, "I don't want to hear any preaching; I am determined to have no more children. I want this operation performed, and if you will not do it I will try some one else; and if I can't get it done in this town I'll travel west till I find some one that will do it." This determined woman found "a physician of reputable standing," it is said, who performed the "operation."

Again: the notion has somehow become prevalent among so-called intelligent women, that miscarriage or abortion at less than three months is a matter of small consequence. There is no life at that period, they say, and consequently nothing is destroyed, and no wrong or crime is committed. They say, "doctor, I have gone two months or a little more over my time, I a'nt quite regular, and I want you to give me something to bring around my monthly periods, and then I shall be well again." Such cases have become so common in practice as

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sometimes to throw the conscientious physician off his guard, and lead him to prescribe what he may afterwards regret. This view is, no doubt, the offspring, in part, of the "private circulars" that are so profusely distributed everywhere in our land. Whether it be correct will, perhaps, appear more clearly as we proceed. But there is still another aspect of the subject which I desire to present.

Neither among the American people, nor in the organization of the Protestant church, is there any standard by which the question of criminalty or non-criminality of the destruction of the *fœtus in utero* previous to a certain period may be decided. All agree that it has life after the period of quickening, and that, unless there be some organic obstruction by deformity or disease, or the life of the mother be endangered, it would be undoubtedly criminal to destroy its life. The moral sense of most people revolts at the idea of destroying the fœtus after this period. It is held to be a high crime by the law and by common consent. But there is a period previous to that which neither law, nor general opinion, nor any Protestant standard covers. And on this point opinions among medical men are divided. It is an open question among them, whether there is really any such life in a fœtus under the period of quickening, as to render it a criminal offence to destroy it. The Protestant Church neither connives at nor encourages the use of any means to thwart the efforts of nature in procreation, but it issues no mandate upon the subject which it regards as obligatory upon all its members. In the absence of all these guides to a right or wrong decision, individuals are left to form their judgment from the circumstances in which they appear themselves to be placed, or from their own desires and wishes, and hence have no settled convictions, except it be that there is no criminality in miscarriage if it be procured within two or three months of conception.

In the Romish Church it is not so. Through all its stages life is carefully guarded by the confessional, which puts the father confessor in possession of secrets communicated to no other person; by the stern denouncement of procured abortion

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as a sin; and by the pains of excommunication fulminated against all who in any wise participate in attempts at its destruction. Hence it is a fact that criminal abortion is seldom found among the adherents of this church, and miscarriage is an event greatly deplored. Hear its edict upon this subject:

"The very instant conception has taken place, there lies the vital germ of a man. True, it is hidden in the darkness of the womb, and it is helpless; but has sacred rights, founded on God's law, and so much the more to be respected because it is helpless. It may be already a living man, for neither mothers nor physicians can tell when life is infused; they can only tell when its presence is manifested, and there is a wide difference between the two things. At any rate, it is from the first moment potentially and *in naturâ* a man, with a body and soul destined most surely by the will of the Creator and by his law to be developed into the fullness of human existence. No one can prevent that development without resisting and annulling one of the most sacred and important laws established by the Divine Author of the universe, and he is a *criminal*, a *murderer*, who deals an exterminating blow to the incipient man, and drives back into nothingness a being to whom God designed to give a living body and an immortal soul. From this it follows that the young woman, whose virtue has proved an insufficient guardian to her honor, when she seeks by abortion to save in the eyes of man the honor she has forfeited, incurs the additional and deeper guilt of murder in the eyes of God, the Judge of the living and the dead. Who can express what follows with regard to those women who, finding themselves lawfully mothers, prefer to devastate with poison, or with steel, their wombs, rather than bear the discomforts attached to the privilege of maternity, rather than forego the gaities of a winter's balls, parties and plays, or the pleasure of a summer's trips and amusement."

Whether this ecclesiastical edict be correct or not, it forms a standard for the guidance of all within the pale of that church organization. Whilst other church organizations leave a question of such vital importance, to the perpetuity of the race, to be decided, as the fancy or caprice of the individual concerned

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shall dictate, the Romish Church solves it at once and for all time. Whilst we as a profession are afloat upon the sea of divided opinion, and are quite unlikely to reach entire unanimity upon all its phases, a body of ecclesiastics, pretending to little, if any, knowledge of physiology or physiological action, have decided the question for the whole body of believers in that faith; and to this decision there is no demurring, nor from it any appeal.

Why is not that decision correct? And why is it not recognized as such by christendom in general? "The very instant conception has taken place, there lies the vital germ of a man,"—"a being to whom God designed to give a living body and an immortal soul." Wherein lies the fallacy of that doctrine? Can it be disproved? Physiology teaches us that the essential conditions of fecundation are the contact of the spermatozoa of the male with the ovum of the female, and the changes which occur as the immediate consequence of that contact. And that immediately upon that impregnation, the ovum starts upon its journey through the Fallopian tubes to the uterus, where it establishes its new existence, and by its immediate commencement of growth manifests its life. It has now within it the rudiments and elements of a human being. It will become a "living soul" if the process of its growth is not interrupted. True, its life is manifested in a different form from that of its more complete development. Yet it is the same in kind as when, perfected in all its parts, the human being opens its eyes upon the world. When did it receive that principle which we call life? The ovum was nothing in and of itself; nor were the spermatozoa. Neither had life. The union of the two, in the locality designed by God for that purpose, produces—what? Life! If it be not life, what is it? What will you christen it? Growth is the immediate result. Is growth ever the result of any principle but that of life? The period of quickening is only a manifestation of the same principle, in another form, a higher degree, an advancement in growth bringing into action new organs and new affinities. And the completion of its period of incubation only introduces it into a world of life—itself alive—

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and sets in motion all the minute wheels of the complicated machinery, in a new stage of its existence. It is the same life with which it first began. In the development of the future man it only exhibits new phases to our view.

If this reasoning be correct, then, does not the edict we have quoted above truthfully say, "he is a criminal, a murderer, who deals an exterminating blow at the incipient man." Grant that the law of the land does not recognize the principle we have laid down, but proceeds upon the assumption that the period of quickening is the legal commencement of fœtal life. How does that affect the question in its moral bearings? Is not the intent the same, whether the future being be struck out of existence when life is only feebly manifested, or when it is more fully developed? The law judges of the intention, and pronounces no man guilty of murder whose malice aforethought is not proved. How is it in the case before us? A married woman, who carries about in her person the natural results of the marriage connection, seeks to prevent the development of the germ. She understands that if unmolested, that germ will gradually develop itself, in accordance with the laws established by the Divine Author, into a breathing, sentient being, stamped with the image of God. She understands, also, that it has life, and that its sentient life is not a new life imparted to it in the process of parturition or contact with the outer world, but only the outgrowth of the parent germ. But she seeks its destruction. The design deliberately formed, and persistently carried into execution, is to prevent its development, to strike out of existence "the incipient man." Is there no criminality attached to such an act? Are not the intent and the result precisely the same, whether the act be consummated at full maturity, at the quickening, or at the moment life is implanted in the ovum? In what consists the difference? The law of man recognizes the one act as murder, and condemns by its penalties the persons who aid, abet or commit the crime. The law of God, which takes cognizance of motives as well as deeds, which regards the act as only the outworking of the heart, makes no distinction among those who violate the command, "Thou shalt

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not kill," whether the act be performed in one way or another, or at one stage or another of human existence. The intent to destroy life constitutes the animus of the deed. Is it not so? True it is, that neither physiologist or physician can determine the precise moment when life is infused. We know nothing of that subtle principle save by its manifestations. The naturalist has watched its progress in the vegetable from the first sprouting of the germ seed to its full maturity in the production of flower and fruit. The physiologist sees the impregnated ovum of the animal in all the stages of its existence from the moment of conception to the end of fœtal life, and he describes to us its changes as it advances in growth from one period to another, with all the exactness of mathematical demonstration. In both are seen the manifestations of a principle of life which eludes their grasp or comprehension. In both, growth is the result. And the fact that neither can determine the exact moment when life began, is a conclusive argument that at no period of its progress can it be destroyed without a violation of the laws of nature and of nature's God, and the risk of incurring their penalty?

The edict of the Romish Church, then, is not only in accordance with the teachings of physiology, but with those also of morality, and the laws of God.

If, therefore, in this discussion, one or any of the causes of the decadence of the American race, as exhibited in the Registration Reports of the States mentioned, have been elicited, it becomes a very grave question to consider, what is the remedy? In reply, I present the following suggestions:

1. There must be a more determined and uniform moral sentiment among medical men. Their testimony should be unanimous against all the means and appliances used for the destruction of life in any stage of its progressive development. As guardians of the public health, we ought to frown upon any and every attempt to interfere with the laws of nature in the production of progeny. Doubtless gold is as cogent an argument with physicians as with other men. The weakest eyes and the hardest hearts are apt to be strengthened and opened, and the toughest consciences made elastic by the "almighty dollar;"

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but the moral sentiment ought to be so strong among us that gold or reputation gained in such manner shall become a stinging disgrace to the recipient. More entire unanimity of opinion is also desirable in regard to the period when life begins in the *fœtus in utero*, in such sense as to make it a crime to destroy it. The diversity of opinions among medical men on this point is seized upon by the abortionist to promote the circulation of his nefarious opinions and nostrums. And perhaps this same difference of opinion among physicians may have been to some extent the occasion of the prevailing sentiment among women, that miscarriage at three months is an innocent affair. Whether it be so or not, there is no doubt that the united voice of the medical profession against the practice, at any and all stages from conception to birth, would render it less popular than it now is, if it did not end it. As physicians, we understand full well the consequences that invariably follow the use of any appliances to induce abortion. We know that a large number of cases prove fatal, and that the lives of the remainder are sooner or later rendered miserable. We know that the practice is detrimental to society, to the peace and happiness of domestic life, and to the moral well-being of all concerned in it. Is it not, then, a duty we owe to ourselves and to thec ommunity, to our profession and to the great Author of all being, not only to condemn the practice as a crime, but to discountenance as unworthy members of a noble profession all those of our number who in anywise wink at its countenance?

2. But the medical profession can not entirely arrest the evil. It is too wide-spread and prevailing. Like some chronic diseases with which we meet, the ordinary methods of cure are unavailing. A radical change in public sentiment is needed. The hearty co-operation of all good people everywhere is required. The current of public opinion among the middle and lower classes has been so strongly setting in its favor for years past, that it has become fashionable for married people to have no children, or to have but one or two; fashionable to escape the joys and duties of maternity; fashionable to use means, internal and local, to avoid the cares of an increasing family-

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Like other fashions, this has become strong and general. It will not be changed at the mere bidding, nor eradicated without a mighty effort. The public mind needs to be educated in a different direction. The moral sentiments must be cultivated. The conscience must be aroused. The deep and damning guilt of destroying the life of a human being at any stage of its existence must be portrayed. The consequences of the act, in the feebleness of future life, in the prostration of the vital powers, in the fearful results of remorse, shame, utter sterility as the curse of heaven upon the guilty, and sometimes insanity, must be presented with all the earnestness and eloquence of truth. By such action, and the prompt and decided co-operation of all good people, of all lovers of their race and friends of humanity, the growing evil may be arrested, and the American race saved from utter annihilation under the curse of God.

3. The earnest co-operation of editors and publishers of the daily and weekly newspapers, and also of publishers in general, is necessary to the accomplishment of the desired end. No doubt the strong sentiment in favor of the crime has been fostered and nourished by the advertisements, and "private circulars" and obscene publications of the day. The idea is prevalent that editors are not responsible for the advertisements they allow to be printed, but only for the matter contained in their editorial columns. They must allow their patrons to advertise their wares in their own way and in their own language. If they pay for it, the space belongs to them. In some sense this may be correct, but it is made the scape-goat for the most shameless violations of decency and propriety, and the publication of sentiments which ought to, and would, make the editor's ears tingle for very shame, if they appeared in any column of his paper not covered by the "almighty dollar." The press is an engine of great power for good or evil in the land, and those who control it ought to be held to a strict accountability for the influence they exert in the community through its colums. Its power can hardly be overrated, and hence the necessity that on a subject of such vital importance as the one under consideration, all its utterances should be in favor of virtue and morality,

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and that everything which tends to demoralize the race, or give countenance to crime in any form, should be strictly excluded from its columns. No doubt a proper representation of the matter to the press of our own State would ensure its cordial co-operation with us in a consummation so devoutly to be wished for by every citizen. But in regard to those who are engaged in the publication and circulation of the "circulars," "pamphlets" and "periodicals," which find so many readers in our midst, we have less reason to hope. If the press refuses to advertise their shameless commodities to the world, one medium of communication with the people will be cut off, and the evil will be somewhat lessened thereby. But it will not perfect the cure. The strong arm of the law, enforced by pains and penalties, and by a determined public sentiment, may be necessary. The united voice of public opinion and of the law, mayhap, will secure the desired co-operation of editors and publishers, and aid us in arresting the evil they have contributed to inflict upon us.

4. But, perhaps, above and beyond all, the moral and religious sentiment of the people should be educated. Its point is blunted. There is now no keen, vivid sense of wrong done, of sin committed, or of guilt incurred, to deter even those who are professedly Christian people from destroying the life of their incipient progeny. Beyond question, the idea of committing murder would be revolting to the moral sense of the whole community. But the act of which we speak is not so considered. Gradually, by an accumulation of pretexts, the voice of conscience has been hushed to silence, so that its admonitions are unheeded. The church and the christian community have slept, while the evil has been growing and strengthening, widening and deepening in its flow. It will need strong arms and determined effort to stay its progress and turn the tide in another direction. But the salvation of a race, imperiled by its continuance, demands that the effort shall be made. We rejoice to see any signs of awakening. Through the columns of a widely circulated religious journal, Rev. Dr. Todd, of Pittsfield, Mass., has uttered the bold, plain, eloquent language of a

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christian heart awakened to a keen sense of the sin and danger of the increasing evil. Public attention is arrested and startled by the array of facts presented. The voice from the East has found an echo in the West, and the press informs us that a recent Western Congregational Convention adopted resolutions denouncing the practice of destroying unborn children as inhuman, unchristian and immoral, and to urge as a solemn duty on ministers, christians and friends of virtue to strive in all judicious ways to awaken the public conscience, and form a healthful public sentiment against the enormous crime.

Let the same voice be echoed and re-echoed through the length and breadth of the whole land, till the sentiment becomes established among all classes, "that he or she is a *criminal* and *murderer*, who deals an exterminating blow to the incipient man," and destroys "a being to whom God designed to give a living body and an immortal soul."—*Boston Medical and Surgical Journal.*

"THE UTERINE ELEMENT IN PRACTICE."

In some of the operations now undertaken with the uterus, is there not some danger of doing harm, even endangering life? Can it be slit up, have its cervix dilated with sponge-tents, injections thrown into its cavity, etc., without any hazard, if discrimination and caution be not exercised? As bearing on this point, I quote a statement in the *American Medical Journal* in a notice of the Transactions of the Obstetrical Society of London: "Dr. R. Greenhalgh presented a paper on mechanical dysmenorrhœa, in which he states that he had operated upon nearly three hundred cases of this affection, with but few and slight casualties. In one there was rather profuse hemorrhage, for which plugging was had recourse to. In about five others pelvic cellulitis ensued, a casualty which is by no means unfrequent after the use of sponge-tents. In one peritonitis was set up, and terminated fatally." Are such incidental casualties, resulting in one case in death, not to be

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taken into the account? Should they not admonish to the practice of some caution? Should they not hinder young practitioners from plunging headlong into uterine practice? There is no part of the physician's business that requires more accurate discrimination, and the specialty of the treatment of female diseases ought not, therefore, to be entered upon at the beginning, but it should be a gradual outgrowth from a general practice, gathering up its stores of diagnosis in the course of long years. This being so, it is not wonderful that we have occasional revelations of great blunders in the the diagnosis and practice of newly-fledged practitioners in female diseases. I have known one, who flourished largely with the speculum, to mistake a head for a breech presentation, when the head could be distinctly felt passing down through the well-opened os uteri, showing his touch was not well educated—however it might be with his sight; and I have known another to diagnose a grave disease of the uterus and prescribe accordingly, when the occurrence of abortion, before the remedies were applied, revealed the true nature of the case. Other mistakes could be cited, but these will suffice. I remark, in passing, that the errors committed from lack of experience in those who undertake early in their practice to foist up a reputation for the treatment of female diseases are undoubtedly frequent, for the few that accidentally come to light must be a small portion of those which actually occur.

I have spoken in a previous article of the commonness of the error of supposing ulceration of the os uteri to exist when it does not. I have no doubt that quacks and demi quacks (of whom we have many in our ranks) often call the slightest patch of redness an ulcer, or even pretend that one exists where there is not the shadow of disease to be seen on the organ. In this latter case the patient may appear to be cured by the local application, and may give the doctor great praise for having found out just what the matter is, as it is expressed, and for knowing just what to do. And yet it is the general remedies that have, of course, effected the cure, while he may have merely pretended to apply the nitrate of silver, or, if he has really applied

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it, his light touches have inflicted no damage that is not readily recovered from by the membrane. Indeed, I have no doubt that even where there is considerable of that lesion which I have spoken of as being by far most commonly found on the os uteri than any other, general treatment alone may often succeed without any local application—that it often did before the speculum was introduced into practice, though it is very certain that judicious local treatment may be of essential service in such cases. To attribute all or most of the symptoms to this lesion where it exists, as is often done, is a great error. In most cases it is a small part of the difficulty, and in many it is one of those local ailments that have their origin in a general condition. I will quote here what Guerin says of the symptoms attributed to the so-called ulceration:

"As the human mind has a great tendency to assign effects to causes which it can readily appreciate, the pains which women so frequently experience in the loins and abdomen have generally been attributed to the ulceration of the uterine neck. This ulceration answers to all—pains of the stomach, of the kidneys, dispepsia, hysteria, nervous affections of all sorts—everything is explained by excoriation of the uterine neck. After having examined many thousands of women, I think myself right in affirming—

"*First.* That these ulcerations can not cause the pains which have been attributed to them.

"*Second.* That these pains are caused, in a very large majority of cases, by phlegmonous inflammation of the large ligaments, by an ovaritis, a pelvic peritonitis, or by a hæmatocele, or finally by an intestinal lesion to which the physician gives no farther thought when he has discovered an ulceration, however slight, of the neck."

I remark, in passing, that it is doubtful whether the symptoms mentioned are as frequently to be attributed to these local diseases as Guerin states—very often they are either functional or nervous results, dependent, sometimes, undoubtedly, upon a morbid general condition, which must be relieved by general remedies.

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Guerin thinks that the usefulness of the speculum has been vastly overrated, while that of the touch has been as much undervalued, of late years, in the investigation of diseases of the uterus. If the question were between not using the speculum at all and using it as excessively as many do, I am free to say that the former is preferable—in other words, I believe that those who rely upon the symptoms, together with what they can discover by the touch, when that is necessary, really make out, in the great majority of cases, a more correct diagnosis than those who make so very much of the diseases of the uterus, and especially of its os, and use the speculum with great freedom. While the latter think, generally, altogether too much of the local disease, and perhaps sometimes find such disease when it has no real existence; the former, though indeed failing, sometimes, to appreciate truly what is local, will, with few exceptions meet properly the necessities of the case. It is these exceptional cases that the speculum is needed to take care of fully. Practically the use of the speculum is required in some cases besides these, for disease of the os may be occasionally suspected where it does not really exist; but allowing all proper latitude for its use as a means of investigation, it need not be frequently employed.

There is one item in the practice of some who have so frequently found ulceration of the os uteri that deserves a slight notice. It has been common to enjoin rest upon the bed for some time after applying the nitrate of silver. I have never found this necessary in any cases where I have applied it, that is, on account of its application, though it may have been sometimes necessary for other reasons. But the expedient certainly gives importance to the local treatment in the eyes of the patient, and is quite a useful part of the programme with the cunning and quackish physician.

Far be it from me to undervalue recent researches in uterine pathology, and the multiform contrivances for investigating and treating diseases of the uterus. At the same time I must say that while with many most flagrant abuses exist in connection with their treatment—often actually quackish—even with

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the best there is apt to be too much made of local disease, and not enough of that which is general. It is precisely as it has been with various local diseases from time to time—for example, to take a recent instance, which has been called the clergyman's sore-throat, an error which has had its day, and is now fast passing away.

The practice of the abuses which I have noticed in the treatment of female diseases is doing much harm in various ways. It hinders from proper investigation, some being so disgusted with Balbirnie, and his succession of apostles of the speculum, that they will not use the instrument at all. It encumbers our journals and other records of the profession with false facts. Not only the statements of those who stoop to quackery, but those of men who have exclusive and one-sided views, mislead the profession and embarrass its investigations. And beyond all this, it brings discredit on the profession, and gives currency to that miserable delusion, the necessity of having female practitioners to be devoted especially to the care of female diseases. The honorable and high-minded physician never need to offend a true delicacy in using all necessary means for the investigation and treatment of disease, but unnecessary measures may so offend, and their influence is wider than in the particular cases in which they are used, and tends to mar the standing of the whole profession, and put it into a false position.—*New York Medical Record.*

DIPHTHERIA.

By Dr. W. Watson Campbell, Dunse.

On the 18th of May, I was asked to visit a young lady, residing at a distance of about eight miles, who was said to suffer from sore-throat. Here I may remark that her brother resided in the same street where the five cases last referred to occurred, and that he occasionally asked after the children while they were ailing as he passed along. He visited his home while the children were ill, and about ten days after he had

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been there I was requested to attend his sister. I found her suffering from diphtheria. The exudation was very adherent, of a dirty yellow color, and extensive—covering nearly both tonsils, the rim of the velum, and the anterior surface of the uvula. She was very feverish and prostrate. She had a shivering three or four days before she was seen, and this was followed by sore-throat, which gradually got worse till I saw her. Deglutition was very painful, and articulation difficult and indistinct. In the treatment of this disease I immediately began with a gargle of the permanganate of potash (grs. x. to the ʒxx.), recommending it to be used very frequently. To insure its application to the whole affected surface, she was told to swallow a little of it now and then, in order that, should there be any trace of the disease further down than could be seen, it might be flushed (if I may be allowed the expression) with it as often as a little of it was swallowed. Iron and port wine were also used. This patient never went back a day from this time, if we except the retardation of cure by sequelæ. Next day the exudation was much less, and in four or five days it had entirely disappeared; and, though the throat was raw and tender-looking, I was much pleased to find matters going on as they were. From the first application of the gargle her convalescence may be safely dated. From that time the pain began to subside, and deglutition and articulation became more easy. She went to the seaside about three weeks after my first visit, and though she had great weakness in the legs, and suffered from almost complete blindness from amaurosis for some time, she is now quite well.

I have no wish to extend this paper further than the subject requires, but must state that, since the last case came under my care, I have had other ten cases to attend, and that, under the use of the permanganate-of-potash gargle, the tincture of the muriate of iron, and port wine, every one of these cases recovered rapidly. I would almost make one exception, and in this case—that of a lad about eighteen years of age—there was only a slight weakness in the legs experienced for about fourteen days. Some of these cases I would certainly have

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despaired of without the aid of the permanganate of potash, so very severe did the attacks seem to be when I first saw them. At the present time I have a very bad case in hand. I was called upon to see him on the 30th of October. He had a shivering on the night of the 25th. On making my first call, his pulse was rapid and wiry, his face pale and anxious-looking, his skin clammy and moist, deglutition very painful, and articulation very indistinct. The same treatment was adopted in this, as in that of the young lady noticed above. I saw him again on the 2d of November. He was clear and bright-looking, the pain was greatly relieved, and articulation was very much improved. He felt, and continues to feel, better ever since he used the gargle. I saw him on the 4th again. The exudation, which was of a dirty yellow color and very adherent, was nearly gone, and the throat was rather raw-looking. Whether the improvement will continue or not remains to be seen, but I have great hope that he will do well.

Perhaps I may be excused for referring to two or three points in my experience of this disease, which are somewhat interesting.

The communication of infection is not necessarily direct. Indeed, in none of the cases I have seen did the disease seem to pass directly from one to another, unless where it spread in the family, as in the first cases I have noticed. On five well-marked occasions, it appeared to have been carried by a third party to a distance varying from one to eight miles. On one occasion it reappeared in the family of the woman attended first in September, 1865, after an interval of six or seven months. Only during my attendance on the last two or three cases have I known scarlet fever to be present in the district.

In some cases of scarlet fever, I have seen whitish pellicles on the tonsils—not very unlike what I saw in my first case of diphtheria; but, otherwise, there was in every case quite enough—even putting the rash out of the question—to distinguish the scarlatinal from the diphtheritic exudation.

In no case of diphtheria did I ever observe an abundant muco-purulent discharge from the nostrils; and though the

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tonsils are generally felt outside to be hard and large, yet I have never seen in this disease a single case of cervical cellulitis.

In all the cases of scarlatina where I have seen an exudation resembling that of diphtheria, there was not long afterward a well-marked and frequently profuse discharge from the nostrils, and, in some of the cases, very extensive cervical cellulitis.

In some of the cases of diphtheria the exudation appeared to select, as its primary seat, the mucous membrane in the upper part of the larynx; and in some of these, by extension of the exudation, a modification of croup was caused.

In no case of scarlatina, even with intense throat affection, have I ever seen croupy symptoms arise to give evidence of the larynx being effected.

I am not aware that palsy is ever met with after scarlet fever, however severely the throat may have been affected, while palsy very frequently follows diphtheria. Only in one case out of thirty-five that I have had under my care have I seen dropsy—œdema of the legs only—follow. Dropsy is comparatively frequent after scarlatina.

In such cases of diphtheria as I have tested the urine, the chlorides have never been found absent, and only in two or three cases have I detected albumen. In scarlet fever we expect a deficiency or absence of the chlorides, and are not surprised at the presence of albumen.

Notwithstanding all this, there may have been found, in the experience of others, more conditions common to both diseases than I have met with. I was certainly surprised at the reappearance of the disease in the same family after an interval of six months—a circumstance which has been known to occur in scarlatina.

With regard to the occasional resemblance of diphtheria to croup, I am disposed to think it accidental; and that the pellicle of the former differs from the false membrane of the latter in extent, in the rule of place, and in the latter being the result of true inflammation.

From my experience of this disease, I venture to differ from

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authorities, such as Dr. Begbie, Sen., and Dr. Jenner, with regard to the disease being constitutional. My opinion is that it is not so primarily, but that it becomes so, not so much, perhaps, by the absorption of poisonous matter from the seat of the exudation, as by the effect that the presence of such exudation may have on the nerve centres, through the nerves distributed to the part on which the exudation has taken place. It may be objected that some cases have ended fatally without much local disturbance, and this by rapid prostration. Still the time required to effect this prostration, and the amount of exudation which will cause death in this way, may, as with other posions, differ much in every case, whether acting indirectly or directly. The best reason, however, for supposing that the disease is local at first, is afforded by the success which has followed the local treatment, and also, by what was very apparent to me, that, on the whole, the more rapidly the local disease was removed, the less likely was the constitution to suffer.

Of twenty-three cases of diphtheria which occurred in my practice before I used the permanganate-of-potash gargle, ten died. Of the thirteen who recovered, four had paralysis to a greater or less extent. On the other hand, of the twelve cases which have occurred since (not including that under treatment), *none* died, and only *two* have had paralysis.

Since I thought of making this communication I have seen a letter from Dr. N. Evans, in the *Medical Times and Gazette*, of October 27th, in which the report of an interesting case is given, which corroborates very strongly my impression that the permanganate of potash may be safely allowed to exercise a remarkably beneficial effect when used perseveringly, and that even in the worst cases a cure may be hoped for, provided the larynx has not been affected.—*Edinburgh Medical Journal.*

Dr. Racle, Assistant Professor in the Paris University, is dead. He was so poor, although a famous author, that the cost of his burial was paid by his colleagues.

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THE MEDICAL REPORTER.

ST. LOUIS, OCTOBER 15, 1867.

Yellow Fever in Galveston.—We take the following from the Galveston *Medical Journal*, of September 1, 1867:

"The yellow fever epidemic still rages in this city. This has been a very fatal month, and thousands have had the disease, and about seven hundred citizens have died and twenty-four United States troops. Many are still down with the disease. Several of our physicians, viz.: Drs. B. F. Clarke, R. G. Salmon, Surgeon Taylor, Medical Director of the State of Texas, Dr. Ulrich, homœpathist, and Dr. Barnett, have died; Drs. W. H. Gantt, R. H. Hanna, Asst. Surg. C. R. Rowe, Asst. Surg. Samuel Adams, Drs. Ernest Brake, Daniels and Tompkins are now down with the fever; Drs. Watts, Garrett, Spann, Davis, C. R. Wilkerson and R. K. Smith have had it and recovered; Drs. Charles Trueheart and Henry Shearer have had light attacks, supposed to be second attacks, as they thought they had had the disease before.

"So far, I believe, at least one in every five of those taken have died. So far as my own notes go and the City Hospital shows, I will state: City Hospital treated in all, patients and employees, 311, of these 73 have died; at United States Post Hospital 164 have been treated, 27 have died; in my private practice I have treated 110 cases, and 8 have died; amongst these 26 children, and no deaths. Two recovered from black vomit, and seven grown persons have recovered—in all, nine. I saw two children in *articulo mortis*, and I visited, in consultation with other physicians, twenty-two cases—of these six have died.

"The type of the disease is the same as given in the August number. Many cases have turned yellow—about one in seven. About half of the deaths were from black vomit, and the others from congestion of the brain, suppression of urine and hemorrhage.

"But few children or negroes have died—only two out of

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thirty in all I treated of negroes. One employee of the hospital (the laundress) died out of twenty-one employees during the month, all except the matron having had, or now have, the disease.

"The treatment in the City and United States Hospitals has been the same, as I have attended both during the month as prescribing physician, and I have pursued the same plan in private practice. The general plan has been to let the patients take as much ice lemonade or water as they wish, to put them in a mustard foot bath, and give them a dose of castor oil, or solution of citrate of magnesia, or any mild purgative: this to be done in the cold stage, or in the first twelve hours. After that time these are omitted, as by this time the fever is usually at its hight, and if the bowels have been moved I have given the following:

"*R.* Hydr. Ch. Mitis.
Opii et Ipecac Pul.
Quinæ Sulphatis aa. ix grs.
M. T. C. No. 3. One every three hours.

"If the fever is very high and skin dry, I give ten drops of Tinct. of Aconite, and other sodorifics according to circumstances. I also vary the proportions according to the case, and do not adopt any rotive practice. These powders repeated will break the fever, but when they do not I still repeat them; and I will say that when they have failed, everything else fails. I cup when there is a determination to the head or stomach; and I have bled four patients—one in *articulo mortis*, and one man twice, and did not break his fever and he died; the other two recovered—all bad cases. After the fever leaves I throw off all covering, except a sheet, or one blanket, which I prefer, and give plenty of beef tea in preference to anything else. If there is vomiting after the fever leaves, I blister the stomach at once, and give the following to prevent black vomit:

"Brandy.
Water, aa. 1 oz.
Creosote, x grs.
Morphæ, ss. gr.

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"Tablespoonful every two hours. If this fails, everything else I have tried failed too; and with it I have cured all the nine cases mentioned. I have given the Oxalate of Cerium in from V to X grs. with good effect, and I believe it to be a most excellent remedy in all cases, both with or without fever, where there is vomiting. I have given the Valerinate of Bismuth to produce sleep and allay restlessness, with the most happy effect, where the patient tolerated the valerinate. I keep my patient at all times comfortable, neither too hot nor too cold; never let them get hungry or faint. I give pure brandy in preference to anything else, and an alkali when the stomach is acid. Prepared chalk is my favorite. I eschew wine of all kinds, and porter and ale, except to the usually intemperate, but much prefer gin or brandy to all others, diluted to the patient's strength and taste. I prefer gin to brandy, where the urine is scant or suppressed. Many patients would sink after the fever went off without a timely dose of brandy, and unless the brain is congested it will promptly produce reaction.

"I condemn the hot bottles, orange leaf tea, and hot drinks in general, and the application to the head of ice or cold water when the patient sweats. Allow fresh air—plenty, but no draft; rooms must be well aired; no getting up to mugs, but use mugs in bed and bed pans; no exercise or sitting up for at least five days after all bad symptoms leave patient. Second day after fever leaves, the sheets may be changed in bed, and patient, lying down, sponged off with brandy and warm water. No one should get up and fatigue themselves, or eat too much. Be prudent in all things for a month, and by all means avoid a relapse, as they are nearly always fatal, and the best treatment for relapse cases is none at all. Always keep patient in bed and comfortable, and counteract anything that may have caused a relapse. Plenty of cold water and nourishment as remedies, which in all cases should be animal food instead of vegetable, and black meats instead of white, or rather fibrinous than albuminous.

"This so far has been my course, and I give the statistical results. I endeavor to see my patients at least twice each

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twenty-four hours, and three times if possible, as the disease is the most changeable and insidious I have ever treated. I say nothing of diagnosis, as good descriptions are in any book on practice, and this epidemic is no exception nor any worse than others described by authors I have read. I have used all the other remedies recommended, but they have disappointed me."

Since the above was written, the fever has assumed a more malignant type, with a consequent increased proportion of mortality. It has also spread far into the interior both of Texas and Louisiana. From the papers we see that it is very fatal. Owing to destitution, much suffering is caused. We trust, however, that the worst is past.

Earthquake on the Coast of Portugal. — An earthquake and volcanic disturbance, similar to those at Santorin, have occurred in the two islands of Terceira and Gracioza, off the coast of Portugal. On the night of the first of June a volcano rose from the sea, about nine miles to the westward of the island of Terceira, and has since been in a state of great activity. It has thrown up enormous masses of stone and lava, and has formed a new island, which is likely to be dangerous to navigation. Sulphur and other vapors are emitted therefrom in large quantity. The boats have not been able to approach the new deposit, because of the incandescence and the dangerous character of the volcanic emanations. M. Saint-Claire Deville has asked the French Academy to appoint some geolgist to inquire into and report upon the facts as in the case of the Santorin volcano.

In the German War last year, 104 officers and 2,573 soldiers of the Prussian army fell on the field of battle; 120 officers and 2,800 soldiers died subsequently of their wounds, making 5,738 in all; and 562 officers and 14,730 soldiers were wounded, but recovered. A French medical journal attributes this mortality chiefly to the want of care on the part of the government for the lives of its soldiers, in engaging in war without any adequate sanitary organization for their relief.

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American Volcanoes.—Volcanoes are numerous in America. In the Rocky Mountains and the Andes there are fifty active volcanoes, of which the most interesting are located in South America. Those in the neighborhood of Quito are remarkable for vomiting forth enormous quantities of water and muddy substances, which fertilize the land to the extent of 25 or 30 miles around them. The subterraneous noise of Cotopaxi extends to the distance of upwards of 500 miles. The reason why the melted lava is not thrown out of this volcano is supposed to be the vast depth at which it lies. It frequently throws out filth from the crater, which is 2,500 or 2,600 fathoms above the level of the sea.

VITAL STATISTICS OF ST. LOUIS.

From September 1, to October 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	613	Still Born	34
White Females	456	Under five years of age	447
Colored Males	38	Between five and twenty years	132
Colored Females	36	Between twenty and forty years.	335
Born in the United States	761	Between forty and sixty years	145
Born in Germany	174	Between sixty and eighty years	44
Born in Ireland	157	Bet. eighty and one hundred y'rs	6
Born in other countries	51	Total	1143

DISEASES.

Accidents	12	Fever Bilious	21
Abscess	2	Fever Puerperal	6
Apoplexy	8	Fever Intermittent	22
Atropia	9	Fever Remittent	18
Asthma	2	Fever Congestive	15
Bronchitis	7	Gastritis	9
Burns	1	Hepatitis	5
Carditis	2	Hemorrhage	8
Cancer	2	Hydrocephalus	21
Cerebritis	7	Marasmus	45
Cholera Morbus	403	Meningitis	27
Cholera Infantum	181	Old Age	1
Convulsions	41	Premature Birth	5
Congestion of Brain	80	Paralysis	2
Croup	5	Peritonitis	11
Diarrhœa	49	Poisoning	1
Dysentery	31	Pertussis	6
Dentition	7	Phthisis	84
Dropsy	2	Pneumonia	17
Diphtheria	5	Scarlatina	3
Delirium Tremens	4	Scrofula	2
Disease of the Heart	6	Suicide	3
Enteritis	10	Trismus	7
Fever Typhoid	41	Tetanus	3

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THE SAINT LOUIS
MEDICAL REPORTER,
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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, NOVEMBER 1, 1867. No. 17.

A CASE OF FEMORAL HERNIA; SLOUGHING FROM PRESSURE OF TRUSS; FORMATION OF ARTIFICIAL ANUS, GRANULATION, CICATRISATION AND PERFECT RECOVERY.

By J. L. WHIPPLE, M. D., St. Louis.

[Communicated for the St. Louis Medical Reporter.]

Mrs. Jaynes is a woman of delicate health, deficient in muscular development, with a contracted chest and an extremely mobile and excitable nervous system.

She has been, for the last fifteen years, suffering from procidentia uteri of an aggravated character. She is the mother of some five or six children, and is about 34 years of age.

My first visit to her was in the spring of the year 1864. I was asked to visit her and do something to give relief to the agonies produced by false pains or a uterine colic. Upon entering her chamber I found her with a cold, copiously perspiring cutis, excessive nausea and efforts at emesis, with severe cramping, colicky pains of the abdomen, and the rapid, weak pulse of depression.

She stated that she was not pregnant, and that, though very subject to those attacks when not pregnant, she was always exempt after the first few months of that state, and until after delivery.

She had, about ten days previous to this attack, menstruated freely and without pain, no interruption whatever having occurred during the process. This attack seems to have been

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induced by a sudden fright and effort made to secure one of her little children from off the railroad track at the near approach of a train of cars at full speed; and she states that they are brought on, when they do occur, by some sudden agitation or effort, and are induced especially by any exertion of a lifting, straining or expulsive character. This seemed to me rather a mysterious form of uterine pathology, and a remarkable list of exciting causes, and I at once made a physical examination. Upon making an examination of the abdomen nothing was noted save the contracted, rigid muscles throwing them into bold relief, and beautifully defining the membranal lines; but in the left antero-superior femoral region a tumor was detected. It was about the size of a green walnut, fully grown, extremely sensitive, elastic—a femoral hernia. The tumor is always present during these attacks, but of varying size; that she has spoken of it to her former attendants, and that by them it had been referred to muscular contractions (spasm); had applied a poultice, giving morphine, which sooner or later produced sleep, and that she has always awoke cured. A poultice had already been applied, and she was clamorous for morphine.

She was put in position and the taxis applied. The tumor was excessively tender; but the strangulation not being serious, the hernia was at length reduced, though much pain, and for the first time she was cured of her false pains without large dosing with opium.

I have stated thus minutely the particulars of my first visit to see her that it may deeply impress the importance of a thorough diagnostic examination of every patient before venturing to prescribe, for I know full well the blunder of her former physicians in attendance resulted from a hurried superficial examination, and a diagnosis based on purely rational symptoms, to the exclusion of the more reliable physical. They are competent practitioners, and would have recognized the hernia as soon as they touched it; but they had never touched it; of this I feel assured. A well-adjusted truss was applied, and I heard nothing more of false pains until March, 1866, when I was again sent for to see her and reduce another prolapsus. She was just

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convalescent from a severe attack of pneumonia, from the effects of which she was slowly recovering. She was much emaciated; and the truss thus rendered painful had been left off, and, as a consequence, a very large prolapsus had resulted, favored as it was by the relaxed and debilitated tissues. It was not at all strangulated; gave no pain; but she, having failed in attempts at reduction (from lack of anatomical knowledge), had sent for me.

Reduction was easily effected and truss re-applied. She was cautioned against assuming the erect position without her truss being applied. Nevertheless, upon the very next morning, and in a similar manner, another prolapsus was induced, which she supposing she had reduced, re-applied the truss and persistently kept on, though giving great pain; for twenty-four hours she suffered, and then, sending for me, I found the truss applied, and upon its removal a small tumor—a knuckle of bowel—was found, upon which the pressure of the truss had rested for twenty-four hours and had effectually strangulated. The entire mass, and for some distance around, was gangrenous, the cuticle peeling off under my finger as wetted paper might have done, and the parts were crepitant from the infiltrated gases, the result of decomposition.

The slightest attempt at reduction now must result in the breaking down of the putrid mass; and if reduction was to occur, it would be that of a mass of putrescence of a gangrenous bowel, that must soon burst and empty into the peritoneal sac the whole contents of the bowels, and prove inevitably fatal.

It was, therefore, evident that it had better slough in its present site, where the putrid mass would find an external discharge, and the possibility of adhesions having formed might result in an outward discharge of fœeal matters through an artificial anus. But it was hoping against reason that she would recover from all this with the dangers and exhaustion of an artificial anus, its foundation, indefinite duration, and doubtful reparation and abolition. Had she been in the enjoyment of otherwise good health, and of naturally good physical stam-

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ina and development, it would nevertheless have been a very bad case, and an ultimate, complete recovery very doubtful; and in her's, reduced to the very brink of the grave by previous disease, with a naturally excitable and weak physique, and enduring at the same time another serious disease, it seemed simply absurd to hope at all. But as all we may do at best is but to lengthen by a little the mortal span, and being encouraged by her hopeful entreaties for aid, I determined at least to do all in my power to relieve her condition.

She was so placed as to relax the abdominal muscles and prevent traction upon the recent adhesions, fearing that in their recent and tender state they might readily yield and the discharge occur into the abdominal cavity. A sufficient allowance of bland, nourishing food directed, with an opiate, bark, iron, etc., in small doses; an emollient and antiseptic poultice applied, and absolute rest enjoined. In about ten hours the tumor burst, discharging a quantity of fœtid sanies, part of the diseased structures, including the dead bowel and a large amount of fluid fœcal matter.

It was now found necessary to administer a full opiate, and for the next fifteen hours she slept profoundly, awakening calm and composed, with a wish for food, a cool skin, quiet pulse, and only a slight burning pain at the new opening.

From this time liberal feeding, mild tonics and corroborants, with occasionally a sedative, constituted the general treatment. Locally, great care was bestowed upon the parts to secure cleanliness and allay irritation, and every character of movement or exertion on the part of the patient prohibited for evident reasons. No protrusion of mucous membrane occurred, and at no period could any vestige of a septum be recognized; and I feel assured that it was sphacelated and expelled along with the first slough formed.

In a few days the slough had all separated, leaving a breach of continuity two inches in width, by about four in length.

The high state of inflammatory action soon abated under the ordinary local treatment. A rapid granulation soon set in, the breach rapidly contracting; and, as the gaseous contents of the

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alimentary tube were being discharged at the anus, I determined to attempt the restoration of the fœcal discharge by the same outlet. A graduated compress of lint was applied and held by a slight pressure, and, to my great satisfaction, the very next discharge of fœces was a copious and painless one by the rectum.

Only a slight discharge of fœces occurred after this by the pathological opening, which closed and rapidly contracted, and finally, in about fifteen days after the discharges had assumed their natural channel, and about thirty-five days from the rupture of the hernia, it closed, and the locality is now the site of a very firm cicatrix, and furnishes one case of hernia radically cured. She was soon upon her feet, rapidly reached her standard of health, and is now (September 30, 1867,) in the enjoyment of better health than she has before enjoyed for many years.

When first upon her feet she experienced some inconvenience from the contraction of the parts incident to cicatrisation, but in a few weeks the parts were accommodated to the new condition, and she at this time experiences no inconvenience whatever from this source. She has no pain whatever in or around the parts or in her abdomen, and the prolapsus uteri seems actually to have been somewhat relieved, probably by the adhesions acting as a fixed point for visceral support. Her bowels are regular, and the discharges entirely normal in character.

Now, what do I claim for this case?—That I have deemed it worthy of presentation: for myself, very little; for nature, much.

Had I, by an officious meddling, in the least degree complicated this case, or thwarted nature in the slightest manner, no powers of our art could have saved her from the grave; but by meeting every demand made by nature promptly, and by warding off the many active elements of disease, I was enabled to sustain nature in her great effort at repair. It was by an increasing vigilance at my hands that she received the due and proper pabluum from which to elaborate the material to build tissues, and without the careful and discriminat-

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ing supply of which they could never have been formed. I claim that my patient recovered solely through the powers of nature to cure disease.

In the management of this case there was much that might have been done (that was left undone) by officious, meddling surgeons or physicians, and that, too, with the sanction of the profession. Will any one, however, with the results before them, believe that more might have been done for the good of the case, or that any judicious treatment was neglected?

The case must be my evidence. She is now living eight miles from the city with her husband and children, a monument of conservative surgery and medicine as convincing as any testimony can be.

COPTIS TRIFOLIA—GOLD THREAD.

BY O. F. POTTER, M.D.

[Communicated for the St. Louis Medical Reporter.]

This useful tonic has of late years been almost entirely neglected, although it is one of the best simple bitters that grow in this country. As is well known, it is an evergreen, with a perennial creeping root of a bright golden yellow color, whence its name, gold thread. The leaves are ternate, and stand on long slender stalks, while the flower-stem is round and longer than the leaves, and surmounted with a quite small white flower. It grows abundantly on this continent, from Canada to Virginia, in wet and boggy places. It flowers in May. All parts of the plant may be used, but the root is only officinal This occurs, dried in loosely-tangled masses of long thread, like filamentous roots, generally commingled with leaves of the plant. It has an orange-yellow color, is almost without smell, and a pure simple bitter taste. Prof. Procter is of the opinion that the bitter principle is berberina, an alkaloid existing in several of the bitter plants; and judging from its general effect, I should presume his opinion is correct. It contains little if any tannin. I found the gold thread a most valuable remedy in dyspepsia, and general debility following cinchona

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in the treatment of protracted cases of intermittent fever, where we wish to increase the appetite. It is also especially useful combined with ptelia or genticus, as a promoter of the appetite in marasmus and female diseases; in the latter it is peculiarly beneficial. My usual prescription is one ounce each of the coptis trifolia and ptelia trifoliata, and one-half ounce race ginger, put in one quart of diluted alcohol. Of this give a tablespoonful three times a day. When the above is not acceptable to the stomach, omit the ptelia, and increase the quantity of the coptis.

A decoction of the coptis, sweetened with honey, has long been used as a wash in aphthous sore mouth of children, but is hardly active enough to be of much benefit.

I feel it always preferable to use remedies indigenous to our own country, and trust to be able to call attention, from time to time, to other native plants, the use of which have been neglected for want of proper notice and trial.

INDISCRIMINATE USE OF ALCOHOLIC STIMULANTS IN DISEASE.

By Samuel Wilks, M. D., Physician to and Lecturer on Medicine at Guy's Hospital.

To my mind, the most important question in therapeutics at the present day is the value of alcohol in disease. If it be said that its frequent use is an evidence of its potency, this is the more sufficient reason why its administration should be watched with the extremest care. Like other drugs, it may be beneficial, useless or harmful. Fevers will do well without this remedy. So wedded, however, are some to the idea of the absolute necessity of stimulants, that they have expressed almost incredulity when they have heard it stated that fevers will terminate favorably without them. Of course stimulants are often needed; but young persons with typhus and typhoid do far better, I believe, without them. That they make good recoveries on simple milk diet is a fact which my hospital cases prove, and which no arguments can gainsay; and, on the other hand, I have

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seen a marked improvement take place in some cases where a stimulus has been left off. It is also a fact that in bronchitis I have repeatedly seen improvement after stimulants have been omitted; and, as regards heart disease, I am convinced that the amount of mischief done by stimulants is immense. In the case of fevers and bronchitis, the weak pulse is often but an indication of extreme capillary congestion, and a stimulus to the heart only aggravates the evil; and in the case of a diseased and weak heart, where repose is indicated, a constant stimulation by alcohol adds immensely to its trouble.

It causes me daily surprise to observe how the effects of stimulation are overlooked. Often have I been called to see a patient apparently dying, sometimes of a nervous disorder, at another time of a liver complaint, and at another of heart disease. He is lying in bed, where he (or she) has been for some time, and kept alive (as it is said) by brandy; the breath is abominable fetid; the heart's action is so rapid that it is impossible to say whether the organ is diseased or not; the patient refuses food, or if this be taken, it is rejected, and so he is plied with brandy to keep him alive; the body is, in fact, saturated with spirit or its elements. My first remark on seeing such a case is, that a man can not live on alcohol; he must take some food or he will die. The correctness of such common-sense remarks is admitted, but qualified with the statement that no solids can be taken, and that if stimulants be omitted it is feared the patient will sink. It is assumed that the constant administration of brandy is necessary for the temporary maintenance of life, and the idea never seems to have been conceived that the stimulation of the heart causes the weak, fluttering pulse, and the stimulation of the stomach a subacute gastritis. Do you ask me what method I adopt? The simplest possible. I withdraw every drop of the stimulant, and in a few hours the irritated stomach is partly restored to its normal condition, the nervous excitement abates, the patient takes a little food, and begins to mend. Do you ask again, whether I do not fear any frightful results from the sudden withdrawal of the stimulus? I say, not the least; I have no fear of the consequences. Not of deli-

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rium tremens? Not in the least. This is a disease not induced by the withdrawal of stimulants, but, on the contrary, is produced by a recent debauch. For the production of delirium tremens the patient must have been such an habitual tippler as to have weakened his brain, and must then have an overdose of the stimulant to set up the disease. These are no facts to show that the withdrawal of the accustomed drink is attended with any evil results, although I know that an imaginary fear of this kind leads to an erroneous and vicious method of treatment—the plying the patient with a stimulant during the violence of the attack, the effect of which is to prevent or prolong the cure. Rest and repose, with the avoidance of stimulation, is the treatment which the patient requires. The success of digitalis may be mentioned in corroboration of this view. I repeat that there no facts to show that delirium tremens is produced by the withdrawal of stimulants, whilst it is a fact, as I could illustrate by many cases, that nothing but good results from its absolute discontinuance in the desperate cases to which I have alluded.

That many cases of disease of various kinds would do far better without stimulants I am perfectly confident. But lately I have seen the case of a gentleman, about sixty years of age, who passed through a most severe attack of pneumonia without the use of stimulants. He had been a tolerably free liver, and would not have been called a good subject; but having before me the case of another gentleman of the same age, who had just died of pneumonia, and who had taken a large lot of brandy, I readily acquiesced in the patient's own view that none should be given. It is very remarkable what extremes we have reached, and on how slight a scientific basis is founded the treatment of pneumonia. Not many years ago the antiphlogistic method was adopted, including bleeding, antimony, calomel, etc.; then came the "let alone" method, and now we have the brandy treatment. What the need of this can be, with Professor Hughes Bennett's statistics before us, I do not comprehend. My own opinion is (but of course this is only an opinion), that in any given number of cases a larger majority

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would recover under the old antiphlogistic treatment than by the more modern method by brandy. As regards heart disease, the utmost discrimination is required in the use of stimulants. There are cases where an undoubted benefit is produced by them; but there are others, and these I have seen repeatedly, where alcohol has induced palpitation, fluttering, great distress and constant sleepless nights, and where, on the other hand, the withdrawal of the spirit and the substitution of a dose of digitalis or henbane has been of the most essential service. The administration of a stimulus, in the attempt to overcome disease, in lieu of good and well tried remedies, evinces the very worst form of medical skepticism with which I am acquainted.

It is not only in these severe cases of disease, but in lesser troubles, that your recommendation of stimulants may do incalculable mischief. You visit, for example, an ailing lady, and she details to you a number of troubles of a nervous and dyspeptic character. She is sitting in-doors all day, taking no exercise, living well, and consequently drifting into a weak and flabby condition. You place your hand on her pulse, and, finding it feeble, condole with her on her state of health, assure her that she does not live well enough, and order her a few extra glasses of wine or a little brandy. You find that she grows no better for the advice; and perhaps you never reflect that you have been adding fuel to the fire. Knowing not what to do in the way of treatment, you order her out of town, and she immediately begins to improve. She goes to Brighton, rides on horseback, or walks miles a day on the Parade, regains her appetite, craves less for stimulants, and her health is restored. If, on the contrary, you fail to remove her from her home, she goes on from bad to worse; she takes to her bed, eats less food, drinks more wine and brandy, until, having become one mass of fatty degeneration, life can hold no longer, and death ends the scene. This lady has been killed with kindness. This is no imaginary case; my mind's eye is carrying me to the bedside of more than one such instance. Do not, then, assume that alcohol is an equivalent to a tonic, and that it must be

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necessarily administered because your patient is weak. It may be that that very weakness is due to the long-continued pernicious effects of this same stimulant; indeed, as you have often heard me say in the out-patient room, if a man comes into our presence with a tottering gait, bloated face, and his nervous energy all gone, you may be quite sure that he has been taking "strengthening" things all his life.—*London Lancet.*

CASES OF INTERMITTENT AND REMITTENT FEVER TREATED WITH CHLOROFORM, INTERNALLY.

By Geo. F. Brickett, M. D., of Chicago.

Case I. Mrs. C., native of Georgia, resident of St. Helena Island, S. C., *æt.* 25, has had repeated attacks of intermittent fever for the past four years; was called to visit her July 28, 1865, and found her suffering with a decided chill, and vomiting every few moments. She informed me that she had had a chill the day before, at the same hour, 8 A. M., which lasted about fifteen minutes. I ordered one fluid drachm of chloroform (undiluted) to be administered at once. She soon fell into a calm slumber, of one hour and twenty-five minutes' duration. She expressed herself to me, on awakening, as feeling so well that I gave her permission to leave her room that day. I made her a visit next day, one hour after the time of the expected chill, and finding her well, I did not leave any prescription; I watched the case several days, but found no treatment required. From that date she has had no treatment, and has had no symptoms of malarial fever. On questioning her as to the effects experienced from the chloroform, she said that immediately after taking the medicine she felt a warm sensation in the stomach, and a peculiar numbness pervading her whole system, but more marked than elsewhere in her hands and feet. These sensations lasted for a few moments, and were succeeded by a calm slumber.

Case II. Lieut. L., U. S. C. T.; *æt.* 24; native of Vermont. At 2 P. M., on the 29th day of July last, was called to see this patient, residing in the same house, and suffering from the

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same disease as the preceding case. The success attending the administration of the chloroform in Mrs. C.'s case induced me to suggest the propriety of his taking the same remedy; but he, believing it to be a mere matter of experiment with me, and reposing great confidence in quinine, requested that the latter medicine be administered, which was accordingly done. On the 4th of August last, while he was suffering from a severe chill, I was sent for; and he begged me to give him anything that would afford relief; I at once administered one fluid drachm of chloroform (undiluted), with the satisfaction of soon seeing the chill pass off, and the patient fall into a quiet sleep. On awakening, two hours from the time the chloroform was given, a slight febrile reaction followed. At the time of his leaving the island (about the 1st of September), he had had no further treatment, and no symptoms of a return of the malarial disease.

Case III. Mrs. A.; native of Ireland; *æt.* 30; resident of St. Helena Island, S. C. Visited her on the 16th day of September last, and found a well-marked attack of intermittent fever. Having no chloroform at hand, gave her quinine; she continued taking quinine (4 grs. a day) until the 10th of October, when her supply became exhausted. On the 26th ultimo, she had another attack of the same fever. Being sent for, I administered to her, while in a chill, one fluid drachm of chloroform, and ordered to be removed all means of warmth, as blankets, hot bricks, etc. The immediate effect of the remedy was to produce a quiet slumber. After two hours' sleep she awoke, with only a slight febrile reaction. No other medicine has been given, and up to this time she has had no return of the fever.

Case IV. Mr. C. D, Acting Third Assistant Engineer, U. S. Navy; *æt.* 25; native of Maryland. Afflicted with remittent fever two days before admission into the hospital; a great deal of febrile excitement followed the chill. He was treated with quinine before admission, but not regularly. On his admission, I ordered him to take 5 grs. of sulphate of quinine, three times a day, but with little effect. On the 3d of November, three days after his admission, one fluid drachm of chloroform was

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given him one hour before the expected chill. After taking it, slept one hour, and awoke greatly relieved. No further treatment was found necessary, and the officer returned to duty four days afterwards.

Case V. Mr A. M., chief clerk to office of M. E. D. S. C.; native of New York; *æt.* 40. Called to this case November 2d, and saw him while in a chill. He informed me that he had had a slight chill the day before, at the same hour, 2 P. M.; found him enveloped in blankets, and drinking hot whisky punch; ordered punch to be stopped, blankets to be removed, and one fluid drachm of chloroform to be administered. The same effect seen as in previous cases, viz.: slumber, and feeling, on awakening, freshened and restored. In this case, however, when I called on him next morning, I found to be present some slight dysenteric symptoms, which were readily removed by simple remedies, and he was returned to duty within a week. He has not had a chill since the chloroform was given.

Case VI. Lieut. Q., U. S. C. T.; native of Wisconsin; *æt.* 25; station on St. Helena Island. Taken sick on the 2d of November. Found him in a most severe chill; immediately gave him a fluid drachm of chloroform; on going to see him next morning, was surprised to see him busily employed at some out-door duty, superintending the construction of quarters. He expressed himself as feeling "as well as ever" I would state that four weeks previous to this last attack, this officer was sent to an army hospital, suffering with a most severe form of malarial fever, and was, on this account, absent three weeks from his post. On his return to this Island he was again attacked, when I administered chloroform, with the above happy result. Since the last attack no medicine has been given, and he has been in the enjoyment of perfect health.

Commentary.—I would remark, that in case I., the chloroform was administered with the intention of relieving the emesis, without thinking it would be found efficacious to the removal of the disease. The happy result that then followed, was of course, entirely unexpected.

The appearance, in the October number of the *American*

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Journal, of Dr. Merrill's excellent article, gave me confidence in the remedy, and I resolved to test it in every suitable case. In each of my cases, in previous attacks, it had been found necessary to administer quinine for several successive days before any decided relief was obtained.

Without going to the extreme of proposing chloroform as a "specific" in these diseases, I would merely call the attention of the profession to this remedy, and I would earnestly solicit further experiments with it.

I deem it just to state that my cases were all frank and open, and without any but the ordinary complications incident to these diseases.

The highly beneficial effect of the administration of chloroform, *without the subsequent use of quinia*, in the cases in which I have given it, justifies me, I think, in placing my experience before the medical public. If these few cases should be considered sufficiently important to attract the attention of the profession, and thereby induce others to experiment with this remedy, I shall consider myself amply rewarded.—*Chicago Medical Examiner.*

PRE-HISTORIC MAN.

The following interesting papers on the question of the antiquity of man were read at a late meeting of the British Association in Scotland:

Sir J. Lubbock read a paper on pre-historic man, in which he expressed the following conclusions, namely—that existing savages are not the descendants of civilized ancestors; that the primitive condition of man was one of utter barbarism; that from this condition several races have independently raised themselves. "These views follow," he said, "from strictly scientific considerations. We shall not, however, be the less inclined to adopt them on account of the cheering prospects

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which they hold out for the future. If the past history of man has been one of deterioration, we have but a groundless hope of future improvement; but, on the other hand, if the past has been one of progress, we may fairly hope that the future will be so, too—that the blessings of civilization will not only be extended to other countries and other nations, but that even in our own land they will be rendered more general and more equable, so that we shall not see before us always, as now, multitudes of our fellow-countrymen living the lives of savages in our very midst; neither possessing the rough advantages and real, though coarse, pleasures of savage life, nor yet availing themselves of the far higher and more noble opportunities which lie within the reach of civilized man."

Mr. John Cranfurd, F.R.S., also read a paper on the antiquity of man, as follows:

"Man, although the latest creation of the class of beings to which he is more nearly allied, is yet of vast antiquity, although that portion of his history which has transpired since he has acquired the art of making a durable and authentic record of his own existence, forms but a very small fraction of it. From the time in which he acquired the skill to frame this record, we have to trace him back over the many stages he had to pass through up to the discovery of his remains in caves, and of those of his handiwork in the recent geological formation, 'the drift.' We must, indeed, go beyond this, and up to his first appearance, when he was without speech, ignorant of every art, and, like the lower animals, chiefly guided by instinct. This is to be inferred from the fact that, where material evidence of man's presence exists, whether in caves or 'drifts,' he is already found in possession of implements of stone, implying a considerable step in advance.

"But the localities in which the physical geography of the land and the genius of its people combined to effect such an early social advancement as was necessary to the attainment of the skill indispensable to the production of a reliable and enduring record of human events, however rude and imperfect, have been few in number, and confined to such as I have en-

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deavored briefly to enumerate. Over the greater part of the earth's surface, auspicious locality and genius of race were not so combined as to have enabled mankind to reach that point. The red man of America, the shepherds of Tartary, the black races of Africa, never even approached it. The most highly endowed and the most happily situated of the nations of Europe had reached it only in comparatively modern times, and might not, indeed, have reached it at all had they not borrowed largely from their more precocious neighbors of Asia. The physical geography of the wild region of Tartary, independent of the quality of race, has made it impossible that man should have advanced beyond the condition of migrating shepherds, who have now and then united in formidable hosts, and proved the scourges of civilized man.

"The peculiar privations, both as to locality and race, which characterize some regions of the earth, have made all advance in the arts beyond what was indispensable to a bare preservation of existence, impossible, and of this we have examples in the land of the Esquimaux and of the Australians. In a few localities even this amount of skill had not been attained. Thus, Spitzbergen, Nova Zembla, and even Iceland, when first seen by civilized man, were uninhabited; and when we see the Esquimaux living and multiplying and spreading in equally rigorous or even more rigorous climates, it is hard to believe but that they must once have had an aboriginal population, seeing that at least animal food is abundant in them. If they had, they must have perished for want of skill to maintain existence. New Zealand would seem to have had no native inhabitants until it came to be inhabited by savages and cannibals from the tropical islands of the Pacific. It is difficult in this case, too, to believe that prolific nature would have left so large a country without aboriginal inhabitants, yet it is more probable that the aborigines were either extirpated or absorbed by the more powerful invaders than that they perished from want of skill in the arts."

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THE FUNCTION OF THE VASCULAR GLANDS.

At a recent séance of the Academy of Medicine in Belgium, Dr. Foisson read a paper, propounding a theory on the function of the vascular glands, that seems to me much the most ingenious and complete of any that has ever been advanced concerning them. The theory carries out the suggestion made by Broussais, who assigned to the spleen the function of deviating the blood from the stomach; so the thymus and thyroid, a similar role for the respiratory organs. This idea, however, being based upon no serious proof, passed unperceived. But M. Foisson has greatly enlarged and strengthened it in his essay, of which I shall endeavor to give you an idea.

The general theory of derivation is the following: All organs submitted to alternations of action and repose require a greater amount of blood during the first than the second period. The variations thus necessitated in their circulation are effected by an agency independent of the general circulation, namely, the appropriate vascular glands, that act by driving the blood away from the organs when they have no need of it.

The only organs in adult life, engaged intermittently in active functions, are the muscles, stomach, brain and uterus.

The muscles, when acting separately, mutually derive the blood from one another, and when they act all together, the heart quickens its action, and sends the excess of blood required. Their variations, therefore, depend directly on the general circulation, and they have no need of special apparatus.

But the stomach is essentially intermittent in its activity. The secretion of gastric juice evidently demands a large amount of blood, to judge from the size of the arteries distributed to its walls. During the intervals of digestion, these arteries are tortuous, and comparatively little blood passes through them. The blood from the cœliac axis being mainly distributed by the splenic artery to the spleen, the tortuousness of this splenic artery may be supposed to be unfolded at an opposite time from that in which the gastric arteries grow straight.

The thyroid gland is the derivative reservoir for the blood

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going to the brain. This blood arrives at the thyroid from the superior throidien given off from the internal carotid—and the inferior thyroidien, that springs from the subclavian close by the origin of the vertebral, so that by a double route the circulation of the thyroid can affect that of the encephalon. In virtue of that same connection, between the thyroid and the brain, do persons affected with goitre so often become cretins; the exaggerated development of the thyroid interferes with the nutrition of the brain, and the more important organ is actually starved out by the fraud of the less, which seizes its supplies *en route*. Finally for the uterus, the mammary glands perform the office of derivation, and, after parturition, when the uterus must retract, and has no further need of the expensive nourishment upon which it has subsisted during pregnancy, the epigastric arteries, prepared for the task by the development they have experienced during the last months of this period, intercept the supply of blood going to the uterus, and convey it to the glands, by means of their anastomosis with the mammary arteries. Among animals in whom the mammary glands are abdominal, the epigastric artery supplies them directly. To this extremely suggestive interpretation of the well-known facts of the case, one difficulty may be addressed. If the extra nutrition of the uterus and mammary glands is carried on at alternate periods, how does it happen that the glands increase during pregnancy? This fact, however, is really provided for by the theory which admits that the satelite organs do increase coincidently with their principals, if only for the sake of being at hand, and in good condition, to receive the brunt of their circulation when the function of the principal organ is intermittent; but, in addition to this parallelism of development, comes the alternative, or contrast, at the moment when the principal organ subsides into inactivity, and the satellite starts into full activity.

For explanation of the office of the thymus gland and suprarenal capsules, the theory is identical, but applied, as it were, in an inverted fashion as respects chronological order. The lungs and kidneys do not function at all during fœtal life, and

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hence have need of only so much nutritive fluid as is required for their growth. But as they begin to act at the very moment of birth, the new supplies necessary for the maintenance of their functions must be stored up close at hand, ready to be turned into their future channels. For this purpose the thymus gland and supra-renal capsules are contrived. The blood during fœtal life is directed towards them, as it were next door, but at the moment of birth the currrent is turned into the neighboring arteries, and from that moment the fœtal organs begin to waste and gradually disappear.

The thyroid gland also, though in action throughout life, is much required during infancy, since the brain at that period, as far as regards its intellectual functions, is in a quiescent or at least passive state, consequently the thyroid gland of children is proportionately much larger than in adults.

M. Foisson refers to the characteristics common to the structure of all the vascular glands as tending to confirm his theory. Huschke and Kolliker agree in recognizing in all these organs the existence of:

1. A foundation system of trabeculæ, serving for a support to the vessels.

2. Vesicular cavities occupying the interstices left between the trabeculæ.

3. The presence in the cavities of liquid charged with globules, and the absence of any efferent canal. Nothing in this structure suggests the idea of a secretion appropriated to the perfectionment of the blood or lymph, while it is on the contrary marvelously adapted for the purposes of derivation.

The entire theory is resumed in the following propositions:

1. All the organs of the economy consume during the periods of their activity an amount of blood more considerable than that required in repose.

2. In the normal state, the heart sends at each moment the same quantity of blood in every branch of the arterial tree.

3. The blood which arrives at organs in excess during their period of repose, is received by special organs called *derivators*.

4. The function of derivation may be performed without

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the intervention of an organ exclusively devoted to the task, as in the case of the mammary glands.

5. Every organ whose function is intermittent, possesses an apparatus for derivation.

6. Derivation is not only arterial, but sometimes venous, as when the spleen receives the *trop plein* from the portal vein, or the thyroid, during muscular exertion, from the engorged jugulars.

7. Derivation is complementary function of the circulation, and necessary to a regular distribution of the materials of nutrition and secretion. At the same time it is not absolutely essential to life, so that in the lower animals any of the vascular glands may be extirpated with impunity.

8. Derivation is explained by the following law of physics: When a pipe traversed by a fluid is divided into two branches, that of the two in which the current is the most rapid receives a greater quantity of liquid than the other.

This theory is so perfectly captivating to me, that as yet I have not been able to imagine any serious objection to its soundness. Perhaps you or your readers may be more critical, and I submit it to your judgment.—*N. Y. Medical Record.*

ON THE TREATMENT OF THE ADVANCED STAGE OF CROUP.

By Dr. Esen. Watson, M.A., Surgeon to the Glasgow Royal Infirmary.

The topical application of solutions of the nitrate of silver of gradually increasing strength is a powerful reducer of the irritability of the glottis, but it requires far too much time for its action, even if it were otherwise suitable to cases of exudative inflammation, which I believe it is not. Emetics do certainly act on the glottis, and are such great helps in relaxing it that they can never be dispensed with; but their operation is only short-lived, and the patient would soon be exhausted by their very frequent employment. The inhalation of chloroform is perhaps the most speedy and powerful relaxer of the glottis at

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present known, and it may with caution be used in the cases to which I am now referring. It has this advantage, likewise, that its action may be maintained for a much longer time than that of those previously mentioned.

A few weeks ago a child of two years old, was brought into one of my wards in the Infirmary, in the advanced stage of exudation croup. I thought he was suffering specially from spasm of the glottis, and had him put under the influence of chloroform, in which state his breathing became much fuller and more satisfactory, while both color and heat greatly improved. But the mother, terrified at some mention that had been made of an operation, would not consent to his remaining in the house, and in spite of all our remonstrances, took the child home that same day, I suppose to die.

Another good relaxer of the glottis is hot water, with which the vinum belladonnæ may, I think, be usefully mixed, and the best way for applying it is by Siegle's atomizer. In this way the patient is made to inhale the mixture as a spray, and even if he be an infant, the air in his neighborhood may be so impregnated with the vapor that he cannot escape its action. I have seen much advantage from this appliance, both in croup and in other laryngeal states allied to it.

These agents for relaxing the glottis have a double advantage; for they both gain time, which is so precious in these cases, and they may be alternated with other means, such as emetics, for the expulsion of the false membrane. They are the only relaxers of the glottis of which I can at present speak from experience; but I do not doubt that when attention is fairly drawn to the subject, other agents will be discovered still more appropriate to the fulfillment of this important end. At all events, this is the direction in which our endeavors ought to point, if we are ever to be able to overcome this formidable feature of advanced croup.

In those cases of the disease in which suffocation becomes imminent from supervention of œdema of the aryteno-epiglottidean folds, tracheotomy is often performed, and were it not for the unsound state of the trachea this would be a successful

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operation. Indeed, it will be found on a careful examination, that the most of those cases which are reported as successful performances of tracheotomy in croup are cases of œdema glottidis, often without a symptom of exudation at all, or in which the false membrane has been previously expelled; for œdema is apt to occur late in the disease after the patient has struggled through its exudation stage. In such circumstances, the obstruction to respiration being at the glottis, tracheotomy relieves with certainty; but I repeat, that if the operation be performed during the exudation inflammation of the trachea, the natural and ordinary result is aggravation of the morbid action too often to a fatal extent. I also assert, with some confidence, that, in the vast majority of cases, œdema glottidis may be reduced without tracheotomy by the timely employment of what I think more rational and certainly much safer measures.

Thus, for instance, I have in a good many cases of this kind successfully applied a strong solution of nitrate of silver to the œdematous swellings by means of laryngeal sponge-probang, and, whenever this is rightly done, it will be found that there is an almost immediate transudation of serum from the tumor whereby its bulk is diminished and the air permitted to pass more easily through the glottis.

If, however, the swelling does not yield to this application, or not with sufficient rapidity for the urgency of the case, there is another procedure of more speedy efficacy which should then be practiced. I refer to pricking or incising the œdematous parts with the laryngeal lancet; a measure which I can thoroughly recommend in suitable cases. In the performance of this little and almost bloodless operation the laryngoscope is not always available, either owing to the age or irritability of the patient; and, perhaps, in all cases, the best and safest way of performing it is to steady the tumor with the forefinger of the left hand, and then putting in the lancet, with its blade concealed till it touches the part at the tip of the finger, to protrude the blade by means of the spring in the handle, and so to prick or incise the part as desired. This is not a difficult

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operation, and I am certain from my experience of it, that it gives relief to the breathing, both speedily and effectually, without incurring any of the dangers of tracheotomy.

When this operation is required during the exudative stage of croup, I find it useful to follow it with an emetic, by which means all the loosened exudation is expelled and the full amount of benefit insured. Much has been said and written of the advantage of particular emetic medicines in croup. But I suppose that the essential quality, desirable in such cases, is speedy action with as little as possible of depressing effect; and this is abundantly fulfilled by a combination of ipecacuan powder with sulphate of zinc. In my practice I never prescribe the tartrate of antimony alone as a vomit, especially to a child, but I find that drug useful in cases of croup in almost every stage, when given in small doses, of the wine for instance; I think its effect, when thus administered, is chiefly that of soothing and calling forth a natural moisture upon the lining of the windpipe. Since, moreover, the antimony is not used in these advanced cases for its depressing effect, it is not inconsistent to employ it as I have described, while at the same time it may be necessary to support the patient's strength with soups, or even with wine. The inhalation of a spray of warm water from Siegle's atomizer is often of essential service after lancing the œdematous aryteno-epiglottidean folds. The vapor just acts as a fomentation does to external parts, by soothing its irritability and reducing congestion.

In conclusion, I think I may now re-state in brief terms the practical results which, in my opinion, flow from the preceding consideration of this subject.

1. Tracheotomy should on no account be performed during the exudative stage of croup; for it is either useless in the worst cases, or positively hurtful in those where there is any hope of recovery.

2. In those cases of advanced croup in which the spasmodically constricted glottis is the cause of immediate danger, our efforts should be directed toward its relaxation, for which purpose no very satisfactory means are as yet known to us;

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but perhaps the best are the inhalation of chloroform and the use of Siegle's atomizer, interrupted occasionally by the employment of an emetic.

3. In those cases in which œdema of the aryteno-epiglottidean folds is the proximate cause of impending apnœa, the swellings should be reduced by the topical application of strong solutions of nitrate of silver, or by the laryngeal lancet. And, lastly,

4. After the expulsion of the false membrane from the windpipe, the performance of tracheotomy will very seldom be necessary; but, if it is required from obstinate disease of the larynx, it will generally prove successful, in striking contrast to the sad results of the operation when performed while the trachea is lined with exudation.—*Glasgow Medical Journal.*

TREATMENT OF PULMONARY CONSUMPTION.

By J. Henry Bennett, M.D.

Dr. Henry Bennet commenced by stating that the subject of phthisis is so vast in itself, in its pathological affinities and connexions, that it would require not one, but twenty meetings, to discuss it in all its bearings. He should, therefore, confine himself to the consideration of treatment, merely making a few preliminary remarks on the general pathology of pulmonary tubercle. Whatever the opinions entertained respecting the origin and nature of tubercle, it was now generally acknowledged that its deposit in the lungs and elsewhere was the result of defective nutrition, itself the result of a lowered state of vitality, hereditary or acquired. It is a sign of vital decay; the forerunner of eventual death, if unchecked; a mere mode of dying. Looking at the subject in a philosophical point of view, tuberculization was not a scourge or pestilence, but one of the means by which Providence purifies the human race, weeding it of effete, worn-out organizations, unfit to perpetuate it in conditions of health and vigor. Were not such laws in operation, the human race would, in a few generations, become one of dwarfs, pigmies of misshapen diseased abortions. The

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attention of thinkers have been much directed to the struggle for life which pertains in wild nature. Effete, worn-out organizations are not allowed to exist. They either die from want of power to procure the means of existence, or are exterminated by their natural enemies. But man has intellect; can provide for his own old age, and for the sickly existence of his sickly progeny. He has passions, desires shared by the weak as well as the strong, and thus society is full of effete organizations, which propagate the race as well as their stronger brethren. But here the laws of Providence come in to correct our errors. The strong in life, in youth and vitality, give the same principle to their progeny; but the weak, the sickly, the old, cannot give what they have not got. Their children are born with the seeds of disease and death in them, and die of tubercular meningitis, scrofula and consumption. Thus is the integrity, the sagacity, of the human race preserved. If these views are correct, if the deposit of pulmonary tubercle is the result of lowered vitality, the treatment of the disease must be essentially sthenic. In the hereditary form, we have to endeavor to renovate, to prolong, a life naturally drawing to its close. In the acquired accidental form, we must, also, try to vitalize the economy, to restore the healthy play of disordered functions, and thus to arrest the fatal progress of the disease. To accomplish these ends the application of the laws of healthy life, of hygiene, affords us infinitely more scope than mere medicinal agents. These laws must be rigorously applied. The patient must be removed from all unfavorable influences; must live in the country, if possible, in the pure air night and day—a condition which can only be accomplished by allowing a current of air to pass through the room in which he or she lives. The functions of the skin must be steadily favored by cold or tepid sponging daily and frictions in all conditions of disease. The food should be as nourishing and abundant as the stomach will bear. Life must be passed out of doors as much as possible, and that without fatigue. The disease being one of debility, there is but little strength left; and much exercise, often any active exercise, is prejudicial, disordering the digestive function and

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impairing nutrition. To enable this hygienic treatment to be carried out, and to avoid the moist cold weather of our winters, so unfavorable to the inflammatory affections which accompany the deposit and softening of tubercular matter, if the means of the patients admit of it they should be sent to a dry, cool, bracing, sunny climate, such as that of the sheltered north shore of the Mediterranean in the Gulf of Genoa, and not to warm, moist, relaxing climates like those to which consumptive patients were formerly sent under different doctrinal ideas. Although no medicinal substance can renovate, renew exhausted vitality—although there is no panacea for such a disease—yet much may be done medicinally to restore healthy functional action, and to improve constitutional conditions. Thus, iron, phosphorus, acids, alkalies, bitters, etc., all find their application, but only as adjuvants to hygiene and climate. They are merely like manure given to plants. A shrub dying in a city square from foul air, smoke, defective drainage, is doctored in vain with guano, bone-dust, etc., while it remains in the site unfavorable to its vitality. Transferred to the country, in pure air and good soil, these same agents may much contribute to its recovery. The inflammatory accidents which accompany phthisis—bronchitis, pleurisy, pneumonia—are mere phenomena, and only require secondary attention, although important in themselves, and destined perhaps to be the eventual cause of death. But, if the diathesis continue, they continue, whatever is done. If the diathesis can be modified, changed, organic vitality renovated, they stop and get well of themselves. Under the combined influence of sthenic treatment, aided by climate, hygiene and medicine, the author has seen many cases of arrest and cure, since he himself has been a consumptive observer, and now looks upon the disease in its early stages as much more manageable than he formerly thought it and found it when actively engaged in large city practice.—*British Med. Journal.*

Dr. Robert Bartholow has been transferred to the Chair of Materia Medica and Therapeutics in the Medical College of Ohio.

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THE NEW PROCESS OF PETRIFYING HUMAN FLESH.

Not long ago I spoke of the lost secret for petrifying human flesh, of the persevering attempts made in Italy to rediscover it, and of the discovery, while making these researches, of another method of preserving flesh, perhaps quite as valuable as the last one. At the Great Exposition, Dr. Burnetti, of Padua, the finder of the new method, was honored with a gold medal, and with the true spirit of a man of science, he came forward the other evening at one of the meetings of the International Medical Congress, now in session at the School of Medicine of Paris, and divulged his secret. The great amphitheatre of the school was crowded with distinguished medical men from all parts of the world, and when the Italian *savant* had concluded his speech, he was rewarded with an ovation which must have been a full compensation for any losses he may suffer from having his secret pass into the public domain. The following details are sufficient to enable any anatomist to avail himself of this important discovery.

The process of Dr. Burnetti, which he explained, comprises several operations, viz.: 1—the washing of the piece to be preserved; 2—the *degraissage*, or eating away of the fatty matter; 3—the tanning; 4—the desiccation.

1. To wash the piece, M. Burnetti passes a current of pure water through the blood-vessels and various excretory canals, and then he washes the water out by a current of alcohol.

2. For destroying the fat, he follows the alcohol with ether, which he pushes, of course, through the same blood-vessels and excretory ducts; this part of the operation lasts some hours. The ether penetrates the interstices of the flesh, and dissolves all the fat The piece, at this point of the process, may be preserved any length of time desired, plunged in ether, before proceeding to the final operation.

3. For the tanning process, M. Burnetti dissolves tannin in boiling distilled water, and then, after washing the ether out of the vessels with distilled water, he throws this solution in.

4. For the drying process, Dr. Burnetti places the pieces in

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a vase with a double bottom, filled with boiling water, and he fills the places of the preceding liquids with warm, dry air. By the aid of a reservoir, in which air is compressed to about two atmospheres, and which communicates by a stop-cock and a system of tubes, first to a vase containing chloride of calcium, then with another heated, then with the vessels and excretory ducts of the anatomical piece in course of preparation, he establishes a gaseous current which expels in a very little time all the fluids. The operation is now finished.

The piece remains supple, light, preserves its size, its normal relations, its solid histological elements, for there are no longer any fluids in it. It may be handled without fear, and will last indefinitely. The discovery is a magnificent one, and the sooner medical schools are provided with full cabinets of natural and pathological pieces, the better.—*Paris Cor. N. Y. Times.*

FOSSILS PRESEVED IN ICE.

About 40 000 pounds of fossil ivory—that is to say, the tusks of at least 100 mammoths—are bartered for every year in New Siberia. As many as ten tusks have been found lying together in the "Tundra," weighing from 150 to 300 pounds each. Notwithstanding the enormous amount already carried away, the stores of fossil ivory do not appear to diminish. In many places near the mouths of the great rivers flowing into the Arctic Ocean, the bones and tusks of these antediluvian pachyderms lie scattered about like the relics of a ploughed-up battle-field. Entire mammoths have occasionally been discovered, not only with the skin—which was protected by a double covering of hair and wool—entire, but with the fleshy portions of the body in such a state of preservation that they have afforded food to dogs and wild beasts. The mammoths appear to have been suddenly enveloped in ice, or to have sunk into mud which was on the point of congealing, and which, before the process of decay could commence, froze around the bodies and preserved them in the condition in which they perished. It is thus that they are occasionally found when a landslip occurs in

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the frozen soil of the Siberian coast, which never thaws, even during the greatest heat of summer, to a depth of more than two feet; and in this way, within a period of a century and a half, five or six of these curious corpses have come to light from their icy graves. A very perfect specimen of the mammoth in this state was discovered in the autumn of 1865, near the mouth of the Jenissei. An expedition was despatched to the spot by the Imperial Academy of Science last summer, and Mr. Lumley, Her Majesty's Secretary of Embassy, states that it is considered the result of the expedition will disclose some interesting facts in the natural history of a former creation.—*Exchange.*

THE MEDICAL REPORTER.

ST. LOUIS, NOVEMBER 1, 1867.

REVIEWS.

THE MEDICAL USE OF ELECTRICITY AS A TONIC, IN NEURALGIA, RHEUMATISM, DYSPEPSIA, CHOREA, ETC., WITH ILLUSTRATIVE CASES By Geo. M. Beard, M. D., and A. D. Rockwell, M. D. W. Wood & Co., Publishers. New York: 1867.

This little work is the result of experimentation by the authors in the application of electricity to various diseases of the system, especially nervousness and general debility. It consists of a series of articles, first published in the *Medical Record,* explaining the whole subject—the methods of application of electricity, the effects and the results of the method of treatment. The work is highly interesting, and of sufficient importance to elicit the attention of the profession to a more thorough investigation of this portion of therapeutics.

STUDIES IN PATHOLOGY AND THERAPEUTICS. By Samuel Henry Dickson, M. D., LL, D., Professor of Practice of Physic in Jefferson Medical College, Philadelphia, etc., etc. W. Wood & Co, Publishers. New York: 1867.

It needs but the title of this work to recommend it to the earnest attention of the profession. Dr. Dickson has long been an eminent contributor to the literature of medicine, as well as an industrious observer of the phenomena of disease; his opinions are carefully weighed and worth knowing on whatever subject he writes. The book contains elaborate essays on

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"Disease, its Character and Tendency;" on the "Causation of Diseases;" on "Certain Morbid Conditions of the Sensorial system;" on "Pneumonia;" on "Scrofulosis and Tuberculosis;" on "Therapeutics" Let every physician read the work.

CHEMISTRY. By W. T. BRANDE, D. C. L., F. R. S. L., etc., and A. S. TAYLOR, M. D., F. R. S. Second American edition. Henry C. Lea, Publisher. Philadelphia: 1867.

The enterprise of the American publishers has afforded to the medical student and to the physician a very accurate edition of this superior work on chemistry. The reputation of the work is established, and but little can be added to its support. With the name of the late Professor Brande, who ranked so high with the chemists of the past and the present generation, and the name, also, of Dr. Taylor, who is unsurpassed in his science, we have before us a work whose opinions upon a subject so changeable as chemistry can not be gainsaid. Undertaken for the interests of the medical student as well as the man of good general education, it places the science in a very practical way before the reader. "Questions connected with abstract science or with chemical philosophy are avoided;" the pervading idea is to afford such information on chemistry as will be of most advantage to the student, who can not devote his whole time to the study. The foundation is laid in this work for a deeper research, if time and inclination permit. Altogether it is a very valuable text-book for the student of medicine, and may well be adopted by every medical college; the constant reference which the physician must make to this science will render the work absolutely necessary on his shelves.

MENSTRUATION, OR THE MENSTRUAL FLOW: AN EPIPHENOMENON OF OVULATION. By G. M B. MAUGHS, M. D., Professor of Obstetrics and Diseases of Women and Children in the Humboldt Medical College.

We refer with much pleasure to this very elaborate treatise on a subject which seems, even at the present day, to be involved in some mystery. The author has exhibited a very highly commendable industry in giving a résumé of the physiological doctrine, that "Menstruation is a complex phenomenon connected with and dependent upon ovulation; and the menstrual flow is not a necessary, but very general accompaniment." The entire range of physiological writings upon ovulation is

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brought forward to develop and illustrate the whole subject, and we have as a consequence a really valuable memoir, which to the student or physician will answer as a reference or as a source of information. We do not believe that the profession of St. Louis is entirely aware of the existence of this treatise. We give our advice herewith to purchase it, for it is worthy a place in every physician's library. It may be found at P. M. Pinckard's, 510 Pine street, and Keith & Wood's.

THE PHYSICIAN'S VISITING LIST FOR 1868.

We are under obligations to Lindsay & Blakiston, Philadelphia, for a copy of the Visiting List for 1868. Every physician knows and values this pocket-book; probably very few are without it; for a day-book to the practitioner there can be nothing better; for a ready reference to the practice of by-gone years nothing excels it. It is to be had at all the book stores.

The Second Annual Course of Lectures in the Missouri Dental College commenced on the 1st of October. We are pleased to see the energy which is brought to bear on the success of this College. So far it has done well. The Faculty is composed of some of the most prominent dentists of the city, who are a guarantee that the teaching of dentistry will be most thorough and effective. The time has come when this branch of the medical profession should be more highly estimated by the community and the physician, and the sole method is by educating the dentist at proper colleges. We are glad that the *esprit* of the dental profession has placed this enterprise on a sure footing.

The St. Louis College of Pharmacy has already commenced its third annual course of lectures on Pharmacy, with a very fair attendance of students. The druggists of St. Louis have manifested a very commendable zeal in forwarding this undertaking, and, we think, thus far its history very favorably compares with that of older institutions. It has gradually strengthened its hold upon the good opinion of the professions of pharmacy and

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medicine, and henceforth will maintain its position and increase its reputation as each successive year is added to its career. Its appliances are already ample for the teaching of the students of pharmacy, and having obtained a prominent hall in the St. Louis Medical College, we may hope to see every effort in its behalf resulting in good and positive advantage.

Compound Prescriptions.—It is said that the Chinese physicians are very courteous in their manner. Their prescriptions are generally vast compounds; they go on the supposition, very common with other practitioners, that it is best to give several remedies together, so that one or the other of them will hit the case. Sometimes they compound as many fifty to eighty different ingredients, and stew them all together and administer them. They hardly ever prescribe less than fifteen or twenty simple medicines.

The same might be said of physicians of more enlightened countries; for we have seen some wonderful compositions in the prescription line. But few medicines should be given together, and these made as acceptable as possible to the stomach. It is time to throw aside the disgusting formula of the past. The accomplished physician will soon be recognized by the simplicity and elegance of his remedies, as well as the polish and gentleness of his manner.

New Preparation.—We are pleased to call the attention of the profession to the very beautiful prepapation of Effervescent Granules of Vichy Salt, Kissengen Salt, Citrate of Magnesia and Seidlitz Powder which Mr. Wm. H. Crawford, apothecary, Washington avenue and Eighth street, has brought to our notice. Although not new, these granules must replace the old fashioned powders and solutions, as well from their greater acceptability to the patient as their greater efficiency. We hope the profession will adopt them; we are sure they must derive satisfaction from them. In this connection we can not but refer to the very full stock of chemicals and medicines which Mr. Crawford has constantly on hand. If only from curiosity it is well worth the time to look over his shelves and see what modern pharmacy is doing.

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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

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OPHTHALMIC MISCELLANIES.

By WILLIAM DICKINSON, M. D., St. Louis.

[Communicated for the St. Louis Medical Reporter.]

ARTIFICIAL PUPIL.

Case No. 1.—Miss S. G., eighteen years of age, is one of three sisters who, together with their mother, in rapid succession, were attacked with "Purulent Ophthalmia" as I infer from the discription given to me. The mother recovered without suffering serious detriment in either eye, though both eyes were involved in the original affection. Each daughter, after suffering two or three weeks intense inflammation in both eyes, subsequently recovered with the loss of one eye. Seven years afterwards, in consequence of the resulting staphyloma in the case of one, giving rise to inconvenience from its magnitude, I performed Critchett's operation for abscission of the projecting part, which is as follows:

The patient being placed under the influence of chloroform, the staphyloma is freely exposed by means of a wire speculum, a series of four or five rather small needles, with a semi-circular curve, are passed through the mass about equi-distant from each other, and at such points as the lines of incision are intended to traverse. These needles (simply passed through) are left in this position, with both extremities protruding to an equal extent from the staphyloma. The next stage of the pro-

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ceeding is to remove the anterior part of the staphyloma. This requires some judgment and modification in size and form, in accordance with the extent of the enlargement, so as to leave a convenient bulb. My usual plan is to make an opening in the sclerotic, about two lines in extent, just anterior to the tendinous insertion of the external rectus muscle with a Beer's knife. Into this opening I insert (one blade of) a pair of small probe-pointed scissors, and cut out an elliptical piece just within the points where the needles entered and emerged. The needles, armed with fine black silk, are then drawn through each in its turn, and the sutures are carefully tied, so as to approximate as closely as possible the divided edges of the sclerotic and conjunctiva. The operation is now finished. Cold water dressings applied to the closed lid constitute the subsequent treatment. In a large majority of cases union takes place by first intention. In thirty cases in which this operation was performed at Moorfields Hospital, suppuration occurred in only four. The sutures are quite harmless, and may be permitted to remain for some weeks. To return from this digression. The operation in question was entirely satisfactory, imparting a degree of comeliness rather than a disfigurement to my patient.

The case of another sister was more unfortunate still. She came first under my observation three years after the original affection, which had totally destroyed vision in the right eye and the integrity of all the tissues which as auxiliaries conspire to its production. With the left she possessed no useful vision, not being able in crossing a room to avoid a chair, or other object of equal magnitude. In this condition she became an inmate of an institution for the education of the blind. The right eye being highly staphylomatous was extremely susceptible to atmospheric changes, irritable and subject to frequent attacks of sub-acute ophthalmitis. These aroused sympathetic inflammation in the left eye, and at each accession vision in it suffered perceptible diminution; in consequence thereof I advised extirpation of the right eye, which was performed by enucleation, *i. e.:* removal of the globe simply, leaving the conjunctiva, areolar tissues and muscles *in situ* in the orbit. These

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several tissues speedily became adherent to each other. From this operation signal benefit resulted to vision in the left eye. In due time I recommended an operation for an artificial pupil, which was accordingly performed.

Present Appearances.—The lid in normal condition, also both the palpebral and ocular conjunctiva; synechia anterior throughout four-fifths of the entire surface of the iris, involving the whole pupillary margin except a small portion about one line in extent in the equator and on the temporal side, to which side also corresponds the remaining free surface of the iris. In consequence of synechia thus existing, a mere rudimentary pupil remains, and hence the almost negation of vision. The portion of the cornea opposed to the free portion of the iris was quite transparent, though invaded by a nebulous fringe projected from the margins of the synechia. The anterior chamber was, of course, very limited and shallow. The condition of the lens could not, for obvious reasons, then be ascertained. The vitreous body was in the state of synchisis, the globe yielding readily to palpation.

Operation for artificial pupil was performed by Iridectomy, the patient being under the influence of chloroform. Having first adjusted the spring speculum, with dentated forceps held in my left hand, I seized the conjunctiva and subjacent areolar tissue, and with a Beer's cataract knife in my right, I made a small incision one line behind the cornea through the sclerotica into the small anterior chamber, and, carrying it forward to the pupil, released as much of the pupillary margin as was desired. Having withdrawn the knife and introduced a minute hook, I engaged it in the pupillary margin thus freed and extracted the portion thus secured. An assistant then, with a pair of curved scissors, excised, as directed, such portion of the iris as was requisite to render the artificial pupil of average size in average intensity of light.

Upon recovery from the effects of chloroform our patient could see the clock twenty-five feet distant and tell the hour, and could see all other objects with like distinctness. No pain or inflammation ensued. Cold water compresses to the closed

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lids constituted the only treatment, except a proper regard to the condition of the bowels.

Impatient of confinement in a darkened room, before a week had elapsed she commenced explorations beyond the limits prescribed, having been to her great delight transported as it were to a new world. Even now she was but slightly affected with photophobia. At the expiration of another week she could read type of about three and a half Snellen, *i. e.*, of the size of type used in the text of some conspicuous newspaper advertisement. The improvement in vision progressed so much during the succeeding week that at its close she voluntarily declared "she could read as well as she ever could." This statement was probably a little exaggerated, for during several months following she confessed that the acuteness of vision for small objects continued to increase; however, she continued to read as much as, and whatever, she desired. Her joy and gratitude were more than she could express. The unexpected rescue from blindness seemed to her the endowment of a new faculty; all nature, the world, and life itself, before shrouded in gloom, now seemed suddenly to have assumed a new aspect. Though oft times in despair, there yet had succeeded only hope; now, by the added benediction of heaven, hope had ended in fruition. Would that all cases that come within our observation were as promising, and that the results of operation were always as signal.

Case No. 2.—Miss G. C. A., aged twenty-seven years, had been totally blind from a child, perception of light alone remaining. Having heard the favorable result of the preceding case, she persuaded herself into the hope that a *like* or a *similar* benefit might be conferred upon her.

Present Appearances.—A considerable prominence of conoidal form existed in both globes, approximating staphyloma. A central perforating ulcer of the cornea had determined prolapse of the irides, and, apparently, their complete adhesion to the cornea throughout their entire concavity. In the left eye, however, careful inspection discovered a narrow zone one-half an inch in length and one-eighth of an inch in width at the periphery of the iris inferiorly, which afforded evidence, though

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very equivocal, that the iris and cornea had here escaped the adhesive inflammation which had so generally involved these tissues elsewhere. No encouragement of a favorable result of an operation was given; on the other hand she was informed that it was extremely doubtful whether from it she would derive the *least* benefit. Notwithstanding this representation she begged that the effort might be made; therefore, having no useful vision to lose, and there being no possibility of improvement but by an operation, I consented. Operation for *artificial pupil* was attempted. Having completed the preliminaries as in the preceding case, a broad needle was passed through the sclerotica, one line behind its junction with the cornea, at the most eligible point of the zone above described. Its point being now clearly perceived, and the problem of the existence of an anterior chamber, though extremely diminutive, demonstrated, the needle was tentatively pushed forward across the narrow zone, only one-eighth of an inch in diameter, severing in its course many fibrous bands of synechia, till the line of adhesion was reached. It was now plunged through the iris, but in such manner and direction as not to endanger the integrity of the lens, which perchance might still retain its transparency. A minute hook was now introduced, and, as in the preceding case, a portion of the iris was withdrawn and excised. Much difficulty attended this part of the operation in consequence of the very limited area in which the operation was possible, and the numerous bands which conspired to retain the iris in position.

The result, however, surpassed my expectation. A tolerably transparent pupil was obtained of about one and a half lines in diameter. Through this even she possesses a degree of vision invaluable to her, a thousand fold repaying her for the little suffering or inconveniences incident to the operation. She is able to distinguish all large objects, pronounce upon colors even in their shades with a high degree of precision, to walk abroad whenever she wishes independent of the aid of others, and in her turn is now able to render much assistance to those by whom she is surrounded.

In this case is enunciated the maxim, "Never decline opera-

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tion, or despair of results," favorable to a greater or less degree, provided only that no useful vision *now* exists, and that there remains the high probability even that in some instances *some degree* of vision, in others an *increased* amount of vision, may be secured. The *eclat* that follows brilliant success may not be obtained in such cases, intrinsically doubtful, simply because the patient is not miraculously translated from darkness to marvelous light. Still the Ophthalmic surgeon should permit this self-sacrifice, and suffer no personal considerations to withhold from his confiding patient the diligent exercise of his beneficent vocation.

In this connection I deem it important to endeavor to remove a general prejudice against operations under circumstances similar to those enumerated, a prejudice rather fostered than counteracted by many medical men. For example, persons possessing yet a little vision with eyes affected with large central opacities, not unfrequently present themselves, who, by reputed authority, have been advised "never to submit to an operation," though no longer able to support themselves by their own exertion. This advice is predicated upon the fear lest the degree of vision already possessed should be compromised by inflammation consequent upon the operation. This apprehension is vastly over-estimated. That an operation, as in every operation, is absolutely free from hazard, no one familiar with the results of ophthalmic surgery would presume to assert; but in the class of cases under consideration, *failure* to restore, or, at least, *improve* vision, is so rare, compared with the great frequency of eminent successes, almost without exception, that no patient, upon a truthful representation of the great *probabilities* on the one hand, and the remote possibilities on the other, should, for a moment, hesitate to "run the risk." What is the utterance of statistics? Out of *seventy-nine* consecutive operations for artificial pupil performed at the Royal London Ophthalmic Hospital, not one was followed by loss of the eye—in not one case was the previous amount of vision diminished; and in all, the amount of vision attained ranged from this latter degree up to perfection. My own experience is to the same

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effect. Usually no inflammation follows the operation, sometimes scarcely appreciable redness even at the point of puncture of the sclerotica. The elements upon which our decision for operation is founded, are few and simple, viz., a portion of free and transparent cornea of sufficient extent for an artificial pupil, and a reasonable probability that the other dioptric media and internal structures still retain their proper functional activity. If these conditions are present, operation is not only admissible, but advisable. For why should one possessing the *power* of vision be denied its full exercise?

Case No. 3.—P. C., of Kentucky, aged twenty-nine years, eighteen months since contracted syphilis. After a course of treatment continued for three weeks, the external signs of disease disappeared and he considered himself cured and the taint eradicated. Three months later he began to suffer severe pain in his eyes, deep-seated and in the temporal region. This persisted during the entire day, but most severe at night. Photophobia was intense, for which he was cupped with great relief. Complicated therewith were pathognomonic signs of syphilitic rheumatism, severe pain in both shoulders, occasionally in the sternum, especially when he took cold, in knees also, and an anomalous but agonizing pain in the hollow of the right foot.

Vision at first not affected, soon began to fail. During the nine consecutive months the eyes suffered frequent attacks of inflammation, with alternations of improvement and relapse, accompanied with intense photophobia and profuse lachrymation. In the meantime vision had constantly diminished. Now supervened a fresh attack of syphilitic iritis more severe than any of the preceding, the consequence of which was the total annihilation of vision in the left eye and impairment of it in the right, to such a degree as to render him unable to distinguish only large objects, unable to distinguish persons or even to walk alone in the streets. Such were the subjective signs narrated when he presented himself for relief, twenty months after the original affection.

Objective Signs.—Left eye much enlarged, somewhat conical,

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hard and unyielding to palpation from intra-ocular pressure. Cornea perfectly transparent, almost complete atrelia iridis, the minute pupil remaining being filled with lymph. The sclerotica was attenuated by the intra-ocular tension to such a degree that the choroidal pigment was visible on the temporal side. A dark pigmental zone also encircles the cornea at about two lines distant. This eye retains no perception of light whatever. A description of the state of the right would be but a repetition of the above, except that it presents the normal tension and perception of light and some degree of vision, obtained through the interstices between the bands of lymph filling the contracted pupil. Upon the dimension of the latter the instillation of a solution of atropine produced no appreciable effect. Simultaneously with this solution an ointment, consisting of equal parts of ung. hydg. and ext. bellad. around the eye, and ext. bellad. internally, were employed, but with negative results upon vision. These combined agencies demonstrated the existence of a minute portion of free pupillary margin on the temporal side less than half a line in diameter. Iridectomy at this point was performed in the same manner in general as in the cases above related. In this case, however, position *in front* of the patient was taken, but the corneal puncture and subsequent manipulations were made with the left hand. Though the withdrawal and excision of the desired portion of the iris occasioned some degree of hemorrhage, an excellent pupil was obtained. No inflammation whatever ensued, the effused blood was gradually absorbed, and in ten days our patient could see sufficiently well to find and pick up a small pin carelessly thrown upon the floor. Being a carpenter, he was confident that he would be able to perform the various duties of his calling with as much precision as those who enjoy unimpaired vision in both eyes.

Dr. E. S. Connor accepts the Chair of Medical Chemistry in the Medical College of Ohio, vice Dr. Robert Bartholow, resigned.

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HOSPITAL REPORTS.

SURGICAL SERVICES AT ST. LOUIS (SISTERS') HOSPITAL. CLINIC OF PROF. E. H. GREGORY, OF THE ST. LOUIS MEDICAL COLLEGE.

[Reported for the St. Louis Medical and Surgical Reporter, by T. Fox]

CASE 1.—DISLOCATION OF FEMUR.—Mary Murphy, aged seven years, was brought before the class, having a dislocation of the head of the femur into the ischiatic notch. Twenty-five days after the accident, the patient being placed under the influence of chloroform, Professor Gregory reduced the luxation without difficulty by the method of manipulation, which consists of flexing the limb upon the abdomen, then carrying it outward and downward, by which method of circumduction and rotation the head of the bone is rolled out of the sacro ischiatic notch and carried over the ischium into the acetabulum.

CASE 2.—FRACTURE OF ULNA.—Margaret Grady, aged seven years, was presented at the clinic, having a fracture of the ulna in its middle third producing angular deformity, which was reduced, the arm placed upon a pistol splint and retained in this position by strips of adhesive plaster. Prof. Gregory called the attention of the class to the advantages of this mode of retaining fractures of the forearm of children in position, as it can not be displaced by their restlessness and the position of the limb is open to the inspection of the surgeon, without the necessity of removing bandages or splints

CASE 3.—OPERATION TO RESTORE THE OUTLINE OF THE MOUTH.—A woman presented herself at the clinic, having a want of prominence of the angle of the mouth rendering her unable to retain her saliva, which was the result of a dense cicatrix of the left cheek, which extended from the inner angle of the eye downwards to the level of the os hyoides, and across the medium line of the chin to the right angle of the mouth. This woman had on several previous occasions applied to be operated upon, but as the burn which caused the cicatrix was received during an attack of epilepsy thirteen years before, and she was still subject to frequent attack of the same, Professor Gregory did not deem it proper to operate lest that in the next paroxysm she would undo all that the surgeon had accomplished. But,

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from the frequent importunities of the woman, he at last consented to operate, which was done after the following method: An incision was begun midway between the medium line and the angle of the mouth, and carried downward and outward to the point where the facial artery crosses the border of the inferior maxilla, and another incision from the same point to a corresponding point upon the opposite side. The lateral flaps were then elevated, their sides approximated, and resting upon the apex of the triangle included between the two incisions, and retained in this position by a silver pin and figure eight suture. The sides of the lateral flaps were joined to those of the triangular one by silver wire sutures. The woman has shown herself at the clinic on several occasions since that time, and the operation has accomplished all that was intended it should.

Case 4.—Removal of Encephaloid Tumor of the Scalp.—A patient of Prof. Gregory's ward was brought before the class, having a large tumor of the scalp in the right temporal region, which began to make its appearance eighteen months previously and following the reception of an injury. Its surface was very vascular and nodulated, having several fungoid looking protrusions upon it. An incision was carried around its base and preparations made to remove it by the Ecraseur, but as its adhesions to the surrounding parts was not very firm, it was enucleated and removed by the fingers. Pressure being made upon the temporal artery but little hemorrhage occurred.

Case 5.—Extirpation of an Eye.—Ella McDonough, aged three years, was brought before the class, having an exophthalmus in the right eye, caused by a tumor in the orbit. The function of the organ was lost, as there was opacity of the lens, absorption of the iris, and a coagulum of blood in the anterior chamber. From the rapidity of growth and general cachexia of the patient, Professor Gregory thought it to be an encephaloid tumor, which upon extirpation of the eye proved to be the case, as deep in the orbital cavity was a brain-like tumor, which by its growth pressing upon the orbit pushed it forward.

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GENERAL RULES FOR DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART.

By David Wooster, M. D.

RULES FOR DIAGNOSIS.

1. If the patient, otherwise in good health, complain of uneasiness in the præcordial region, cardiac disease may be suspected.

2. If a murmur be heard at the base, systolic in time—that is, with the first sound of the heart, which diminishes in intensity as the ear is moved toward the left nipple, it indicates roughness of the aortic orifice.

3. If a systolic murmur be heard at the præcordia, and if it increase in intensity as the ear is moved toward the left nipple, and diminish as the ear is moved up the sternum, it indicates *mitral regurgitation*—that is, insufficiency of the mitral valves.

4. A murmur heard at the base of the heart, (about the junction of the third ribs with the sternum) thence down the sternum, coincident with the *diastole* (second sound of the heart), indicates *aortic regurgitation.* If to this sign be added visible superficial pulses, and a hammering pulse at the wrist, aortic regurgitation is certain.

5. A murmur coincident with the second sound heard about the left nipple, or in the fifth interspace below and to the right of the left nipple, and along the heart toward its base, and nowhere else, indicates mitral constriction. [This murmur is very rarely heard.] If to this be added a slight cough, the lungs being sound, and hypertrophy of the right ventricle—mitral constriction is indubitable.

6. A murmur heard loudest above the base of the heart in the upper part of the thorax, indicates aneurism of the aorta, or innominata, or subclavian artery. If to this sign be added a pulse of unequal strength in the two wrists, or absent in one wrist, aneurism is almost certain. Difficulty of deglutition and paroxsyms of dyspnœa add greatly to the probabilities of aneurism; indeed, with the preceding signs, render it indubitable.

7. If there be bulging of the left side, near the mid sternum,

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and heaving impulse of the heart, and strong, full pulse, there is hypertrophy of the heart.

8. If there be a visible undulatory impulse, or heaving of chest, if the pulse be not strong nor very resistent, if the first sound of the heart be clear and more distinct, and seem nearer the ear, and have more of a knocking character, there is *dilatation* of the heart. If there be much bulging of the interspace, and if the pulse be strong enough for hypertrophy; if the apex be outside of the left nipple and below the sixth rib, there is hypertrophy with dilatation. If there be also dropsy of the lower extremities, the probabilities of dilatation become certainties.

9. Basic murmur, coincident with first sound heard loudest at the junction of the third costal cartilage with the sternum, and thence down the sternum, attended with persistent and jugular pulse, indicates almost positively tricuspid regurgitation —insufficiency of the tricuspid valves: if to these two signs general turgidity of the venous system be added, tricuspid regurgitation becomes certain.

10. An endocardial murmur, whether systolic or dyastolic, whether at the base or apex, heard suddenly during course of an acute rheumatism, or after a violent blow on the præcordia, or during Bright's disease of the kidneys, indicates endocarditis in the most positive manner.

11. An attrition or friction sound heard over the præcordia—that is, over the fifth left costal cartilage, while the patient holds his breath, indicates pericarditis in the most positive manner.

12. Softening of the heart, without fatty degeneration, occurs only in cases of asthenic or adynamic diseases of an inflammatory nature. If in such cases the pulse grows feeble out of ratio with the intensity of the adynamic disease—for example, a typhus or typhoid fever—and remains weak and unequal, become easily excited and fluttering, if at the same time the patient feel steady præcordial uneasiness, softening, of the non-fatty variety, is extremely probable.

13. If the same symptoms mentioned in the foregoing rule be observed in a *bon-vivant* of luxurious and idle habits, especially if he be at the same time an intemperate drinker, fatty

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degeneration of the heart is almost indubitable. If to these symptoms be added epileptiform seizures, and if the respiration varies greatly in uniformity as to frequency and force without any external cause, and at the same time the patient be over forty years old, fatty degeneration may be considered certain.

14. *Angina pectoras* can not be mistaken if the suffocation, præcordial pain, the dread of imminent death, have once occurred, so as to be described by the patient in these or similar terms, without having been questioned by the physician. The symptoms pertain, in their clearness and pertinence, to no other affection.

15. A murmur coincident with the first sound heard at the base and propagated up the aorta, in an anemic person, whose blood under the microscope exhibits defect of red or excess of white globules, is an inorganic murmur, and indicates merely altered condition of the blood, or altered dynasium of the heart.

PRINCIPLES OF TREATMENT.

1. The first and most important principle to be kept in view in treating a diseased heart, is to diminish the labor it has to perform.

2. This is done in two ways: Directly, by diminishing the amount of blood in the body; by diminishing the functional activity of all the organs not concerned in secretion, and by increasing the functional activity of the skin, liver, kidneys, lungs and alimentary canal.

3. Blood may be abstracted directly, either from the arm by venesection, or from the præcordia by cups, when from general plethora or overwhelming local congestion, a sudden diversion to the blood-current is deemed essential; or the total quantity of blood in the system may be diminished by reducing the weight of the body—the loss of eight pounds of weight is the loss of one pound of blood. Blood never is to be taken with a view of cutting short an inflammation, or curing either an acute or chronic affection, but merely for the purpose of relieving an urgent symptom, or arresting an imminent catastrophe. On the other hand, bleeding is not so hazardous as many would wish us to

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believe. If the digestive organs are unimpaired, loss of blood by hemorrhage is restored with astonishing rapidity. In this respect, anemia from traumatic hemorrhage or venesection is widely different from pathological anemia, depending on lesions of nutrition, assimilation and innervation; in short, on lesions of all the organs of the body. Blood deterioration in this case is repaired with extreme slowness, and this is not to be used as an argument against venesection, leeching or cupping. A few pints of beef tea will restore as many red globules as are removed by a copious bleeding.

4. So local bleeding, even in anemia of slow growth and long duration, is not always objectional to mitigate a threatening local symptom. For example: take a case in another department of pathology. A child of six months, more or less, badly nourished, with insufficient mother's milk and cow's milk, and farinaceous mixtures, has chronic diarrhea. If in the course of treatment we intentionally diminish without arresting the diarrhea, the child now has tonic spasm of the fingers and toes, the eyes pitch back under the brow, or look straight onward, seeing nothing; it rolls its head and moans, and starts with sudden shrieks. This child is anemic, very pale, waxy almost, but its head is burning hot. Now, if a single leech be applied at the anterior fontanelle and allowed to fill, and after it drops off the bleeding be encouraged by the application of compresses wrung out of hot water, not only over the bite, but over the whole top of the head, for the space of a whole hour; if this be done within the first twelve hours after the tonic spasm becomes manifest, the chances are more than two in three the child will recover; providing it be nourished with beef juice, and medicated solely with minute doses of creasote subsequently, and kept warm at the abdomen and extremities. Now, this is a case in which an apology is needed: yet, I have bled in twenty recorded cases in this manner, and in seventeen have had the satisfaction of seeing my little patients recover.

5. As a general rule, depletion by bleeding is not required in diseases of the heart.

6. By abstinence from hard labor, mental or physical; by

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abstinence from all severe exercise, and by avoiding all violent emotions or passions, the demands of the heart are obviously lessened, and hence its labors are lightened.

7. By aperients regularly taken, by diuretics often repeated, by hepatic stimulants taken from time to time, by unobstructed access to the atmosphere at all hours of the day and night by baths, frictions and abundant passive exercise, the functions of the liver, skin, lungs, kidneys and alimentary canal are certainly increased, and that not in a way to be detrimental to alimentation, assimilation and nutrition.

8. Whatever degree of sedative impression we desire to make on the heart, must be made slowly, not suddenly. A violent blow on the pit of the stomach will stop the heart forever. A thousand light blows or a heavy weight would produce but little effect. Small doses of cardiac sedatives, often repeated and carefully watched, are better than large ones, however judiciously administered.

9. The quality of the blood must be maintained as near the normal standard as possible, while its quantity may be diminished by restricted diet, and certain evacuants, in proportion as the disease of the heart advances.—*Canada Medical Journal.*

CARBOLIC ACID IN SURGERY.

By George Derby, M. D., Surgeon to the Boston City Hospital.

The use of carbolic acid in surgery is based directly upon the investigations of M. Pasteur on putrefaction, in which he shows the relation of infusoria to the process. The results of his experiments, as published in the *Comptes Rendus* of the French Academy, and in the *Annales des Sciences Naturelles*, are briefly these: Putrefaction is fermentation. Fermentation is putrefaction. The process is one and the same, and in all cases determined by the presence of infusoria. They, in fact, are the true ferment. These infusoria are minutely described by Ehrenberg and also by Pasteur. They are chiefly Vibrios and Bacteria. Pasteur says they resemble, in certain respects, plants rather

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than animals, and they may be regarded as among the most minute and imperfectly organized forms of life, whether of the animal or vegetable kingdom.

"Should these microscopic beings disappear from the globe, the surface of the earth would be encumbered with dead organic material, and bodies of all sorts, animal and vegetable. Without them life would become impossible, since the work of death would be incomplete."

The above extract from Pasteur shows how far these ideas of putrefaction reach. They revolutionize the doctrine that the vital principle alone defends organic material from the destructive action of oxygen, and show that neither air nor water can convert organized substances into simple elements. That process is due to infusoria.

These organic germs are everywhere present in the atmosphere. Pasteur found them on Jura, at Montanvert, and at other great elevations, although in diminished numbers. In Paris every bubble of air contains myriads. In hospitals they particularly abound. It is certain that they exist in every place occupied by man.

The application of these ideas to practical surgery was first made by Mr. Lyster, a surgeon of Glasgow, and an account of his experiments has been recently published in the London *Lancet*. He sought to prevent decomposition of the fluids thrown out in cases of compound fracture. To do this an agent was required sufficiently powerful to kill the infusoria already admitted by the external wound, and which should not be also destructive to the tissues. Such an agent is found in carbolic acid. This he applies freely to all lacerated parts which have been exposed to the air, and then seals up the external wound with the same substance, claiming that by this process a compound fracture is converted into a simple one. Abscesses are also treated on the same principle, the access of infusoria to their interior being prevented by holding a cloth wet with carbolic acid in front of the abscess at the moment of making an incision.

It has occurred to the writer that a simpler and more effect-

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ual way of securing this result would be by throwing a jet of carbolic acid spray from an atomizer upon the point of opening.

The following case, which by itself proves a little, and yet may be regarded as a contribution to the history of this interesting question, was reported at the last meeting of the Boston Society for Medical Improvement.

September 21st, 1867. A boy, nine years old, was received at the Boston City Hospital, with compound fracture of the middle of the right thigh, having fallen from a tree three or four hours previous to admission. The external wound was on the anterior face of the thigh, and large enough to admit a finger, by which the ends of the broken bones could be touched. A good position was got by means of sand-bags and a five-pound extension weight. A solution of carbolic acid in glycerine, equal parts, was then applied freely to the wound, all parts being touched which could be reached by a bit of sponge held with dressing forceps. No ether was used, and the application caused very little pain. The external wound was then covered with a piece of lint soaked in the same solution. On the following day this was found to be firmly adherent to the adjacent skin. During the following four weeks this covering never became detached. Fresh pieces of lint soaked in carbolic acid were occasionally added to it, and the surface was daily moistened with the solution above named. A few drops of serum occasionally oozed from the edge of the lint, but not a drop of pus. At the end of four weeks the covering was removed, disclosing a round, superficial ulcer, half an inch in diameter, which in a couple of days was covered with a firm scab. There is now (Oct. 26) firm union of the bone.

From the beginning to the end of this case there has been no constitutional disturbance, and in every respect the patient's condition could not have been better had the facture been simple.—*Boston Medical and Surgical Journal.*

Dr. D. S. Young has been appointed to the Chair of Surgery in the Cincinnati Medical College.

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ON THE TREATMENT OF REMITTENT AND YELLOW FEVERS.

By J. D. Miller, M. D., Surgeon U. S. N.

I submit the following simple statement of facts which have come under my observation in relation to the treatment of remittent and yellow fevers:

I joined the United States frigate Colorado, then blockading the port of Mobile, about the 22d of August, 1863, and found a malignant fever existing on board, the first case of which made its appearance on the 10th of the same month, and had terminated fatally on the 16th with what was supposed to be "black vomit." Two days after I joined the ship the second death occurred, after five days' sickness. During the next ten days there were five deaths, after two, three, and four days' sickness —making seven in all. Each of these cases presented the following train of symptoms: An initial rigor followed by more or less febrile action; extreme debility; headache and pain in cervical and lumbar region, and, in one or two cases, in the lower extremities; ischuria; constipation; hebetude; gastric irritation and delirium. After the subsidence of the febrile paroxysm the skin became cool and moist, the pulse small and frequent, and black vomit ushered in death. The cadaver presented a deep, lemon-colored hue, and emitted an offensive odor.

At this time becoming thoroughly disheartened by the result of the treatment with calomel and quinia, so generally adopted in American practice, and on which I had mainly relied, I determined to try a remedy which, though it is not new, is far too much lost sight of—the *hot* bath. I had the bath-tub brought to the side of the patient's cot, supplied it with water drawn from the boilers and reduced to the temperature of 114 degs. F., immersed the patient in it to the chin, and, with my fingers on the wrist, carefully noted the following results: The pulse immediately became fuller, softer, and less frequent; the pain in the head and back abated; the lethargy passed off and the ischuria was relieved—micturition taking place either in the bath-tub or very soon after leaving it. When the water felt no longer hot to the patient—say after the expiration of five

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minutes and within ten—he was lifted from the tub, wrapped in a blanket without drying him, replaced in his cot, covered with other blankets, and left in that state to perspire freely for several hours. I found that the change in the patient was permanent. Not a single symptom regained its ascendancy. The pulse remained good, the hebetude disappeared; the pain in the head, back and limbs gradually ceased, the renal excretion went on regularly, and the extreme lassitude gave place to returning strength.

On the morning of the second day following the bath I gave whisky by the tablespoonful, every hour, in double the quantity of water, to the extent of half a dozen spoonfuls, and if the bowels had not been previously opened, I gave the oleaginous emulsion, continuing the whisky on several consecutive days, to the same extent. This constituted the whole treatment, and the patient was walking about at the end of a week, complaining only of debility, and with all his functions in a normal state. I wish it to be understood that the case which I have described gives the history of every case thus treated. The last death occurred on the 4th of September, and at that time there were several cases apparently slipping away under the same symptoms. They were all put in the hot bath and *all* recovered. At the time I hesitated to attribute such marvelous efficacy to so simple a remedy. I thought of all possible coincidences which might have had something—perhaps everything—to do with the result, and was unwilling to assert the involuntary conclusion of my own mind. I waited for further evidence.

On the 26th day of April, 1867, a man died of yellow fever on board the frigate Susquehanna, then cruising in the West Indies. Several cases followed this death, presenting the same symptoms, and again I resorted to the hot bath and with the same happy results. I do not feel at liberty to withhold any longer this publication of my experience, if only for the benefit of the medical officers of our naval service, who have to encounter this formidable disease. If yellow fever be not a distinct disease, of isolated character, but merely a malignant type of ordinary remittent fever, developed by climatic or local causes, as

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many of the profession think, then it follows that remittent fevers may be successfully treated in the same way.

The first man put into the hot bath on board the Susquehanna had diarrhea, with frequent watery dejections. As in the former cases the first effect was to enlarge the pulse and reduce its frequency. Very soon, however, it became suddenly depressed, and he expressed a wish to be taken out. I instantly had him removed from the tub, but the diarrhea was checked and the recovery was not less favorable than in other cases, though rather more protracted.

It ought to be unnecessary to enjoin a personal superintendence and care in this treatment of fevers. It is all important that the water should be as hot as the patient will bear it. The physician's fingers should be on the pulse from the moment he is put into the tub, and when taken out he should be enveloped instantly in blankets, and carefully watched that he may not throw them off under the extreme discomforts of the sweating process.—*American Journal of Medical Science.*

OVER-EATING AS A RISK TO LIFE IN OPERATIONS.

Over-eating is not commonly supposed to lead to any such risks of life as over-drinking does, yet I believe that you will find in operative surgery, that among the habits that increase the risks of life, this may stand not far from drunkenness, especially if the over-eating is of meat and other nitrogenous foods. I am led to believe this from several cases that I have observed, and I think that there are large evidences of it. You know that the general results of operations in provincial hospitals tell of a smaller mortality than in the hospitals of London and the largest towns. The difference is commonly ascribed to differences in the purity of the air, and other advantages of that kind, in the comparatively rural districts. I believe that much more of it is due to the differences of habits in the several classes of patients. The differences are many; but one of the chief of them is, that the poor in the agricultural districts eat

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far less meat than those in large towns do, and are by comparison less fed, though probably not worse fed; and you may frequently observe that patients who come to us from agricultural districts bear operations in all respects better than Londoners who are submitted to the same proceedings. Of course many things concur to make the differences of constitution between a town and a country population; but I am satisfied that among these things a very potent influence is exercised by the difference of diet; and the differences that we may thus see are strongly illustrated by what one hears of the results of operations upon the natives of India and other Eastern countries, whose diet is almost exclusively vegetable. Almost any amount of injury may be inflicted on them and not be followed by the destructive mischiefs which occur in Europeans under the same circumstances. They are defective, it is said, in healing power; but they recover with comparative certainty, however slowly, from operations of the greatest magnitude. A common expression about them is, "You can't kill them."—*London Lancet.*

ORIGIN OF LIFE ON OUR GLOBE.

With regard to the origin of life on our globe, M. Figuier does not dogmatize:—"Did plants precede animals, we can not tell, but such would appear to have been the order of creation." Our globe, he thinks, during the Cambrian and Silurian periods, was not yet mature enough for the existence of the higher organisms. "A pale sun struggled to penetrate the dense atmosphere of the primitive world, and yielded a dim and imperfect light to the first created beings as they left the hand of the Creator, organisms often rudimentary, but at other times sufficiently advanced to indicate a progress towards most perfect creations." The absence of organisms more advanced in the zoölogical scale than were the Trilobites, is no proof that more highly organized animals did not exist on the globe during the Cambro-Silurian period. Those who think the Darwinian period approximates to the truth, and especially those who

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hold the "complete" theory, will of course believe that animals, classed as high among the Vertebrata as the Trilobites and Cephaloboda of Lower Silurian rocks are among the Annulosa and Molusca, existed at that time in regions of the globe from which the ocean, perhaps, forever excludes the inquiring palæontologist from verifying his conjectures. The discovery of the Eozoon Canadense in the Laurentian rocks, and the existence of beds of limestone in the same system, seem to confirm the views of those who regard the whole of the sedimentary rocks, from the Silurian and Cambrian upwards to the latest Tertiary beds, as including but a partial and fragmentary record of the past life of the globe—impressions of the last-formed links of the great chain of organic life on our planet—a few of the last chapters in the book of "Ancient Life."—*Quarterly Journal of Science, London.*

ARE OUR FEET PROPERLY CLOTHED.

It is somewhat surprising that, with all our boasted improvements, we have not as yet produced a proper covering for the feet. Barbarous people, if their climate admits, go with bare feet, or wear sandals covering only the sole of the foot. We, however, encase the whole foot, and a portion of the leg, in a material almost impervious to air and moisture, and generally uncomfortably hard and rigid. The color and polish of our boots are directly calculated to attract the sun's rays; and the enamel on patent leather, and the blacking on ordinary calf-skin, tend to harden and solidify the substance; closing the pores and making air-tight cases for a portion of the body, which exudes more perspiration than any other, and is subjected to greater strain.

Our boots in summer parboil our feet in a warm bath, and in winter freeze them in an icy envelope. It is doubtful if wet feet are, in themselves, very conducive to disease, some medical men to the contrary notwithstanding; but cramped confinement of the feet, in an icy cold envelope, generated by perspi-

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ration and chilled by the external atmosphere, thus shutting the imprisoned feet almost air-tight, is as unhealthy as it is uncomfortable.

For hot weather there is hardly any shoe so agreeable as that introduced within the past three or four years, known as the army shoe, and extensively used by base ball players. It is of canvas and unblacked leather. It is cool and remarkably easy to the feet. The texture of the canvas allows the escape of the perspiration, and the color of the shoe does not attract the heat of the sun.

It would seem that the plan of covering other portions of our body with material pervious to air might advantageously be extended to our feet. There is no natural reason why our feet should be so much less sensitive than our hands. They become indurated and deprived of their natural activity by long confinement. The people of warm climates, and the bare footed school-boy, who picks up and throws pebble with his feet, show that the foot of the civilized adult in our climate is a much abused member.

A more flexible and porous material for our boots and shoes might save us from many of those terrible annoyances which, in the form of corns and bunions, make our pilgrimage one of pain.—*Scientific American.*

BLOOD IN THE BODY.—The amount of blood in an adult is nearly thirty pounds, or full one-fifth of the entire weight. The heart is six inches in length and four inches in diameter, and beats 70 times per minute, 4,200 times per hour, 100,800 times per day, 36,772,000 times per year, 2,565,440,000 in threescore and ten, and at each beat two and a half ounces of blood are thrown out of it, one hundred and seventy-five ounces per minute, six hundred and fifty-six pounds per hour, seven hundred and three-fourth tuns per day. All the blood in the body passes through the heart every three minutes.

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THE MEDICAL REPORTER.

ST. LOUIS, NOVEMBER 15, 1867.

REVIEWS.

THE PHYSIOLOGY AND PATHOLOGY OF THE MIND. By HENRY MAUDSLEY, M. D., London, Physician of the West London Hospital; Honorary Member of the Medico-Psychological Society of Paris, Etc., Etc.

Appleton & Co., of New York, have issued this work in their best style. The typography is perfect and adapted to almost the poorest vision; the tinted paper is of the best quality; and the whole work bears the impress of thoroughness in all that relates to the mechanical department. Such a work we like to handle, from its characters as above, as also from the positive mental vim which the author conveys through it. We have seldom read a work more to our satisfaction than this. Couched in language precise and eloquent, the figures which adorn it indicative of a highly accomplished mind, the author is able to convey to his reader thoughts far superior to the usual quality of medical emanations. The method of considering the subject of insanity differs from the routine; leaving the beaten track, we find mental phenomena treated from a physiqlogical point of view, where hereto it has been metaphysical. He who reads this work must have studied physiology as at present known, as demonstrated by Carpenter, Laycock, Flint and Dalton. The first chapter in the method of the study of mind, as a philosophical essay, is by itself worth the possession of the book. The succeeding chapters, on the relation of mind on the nervous system; the meaning of mind; reflex actions; sensations; ideas; and the various powers of the mind in reference to emotion, volition, &c., form as a whole one of the first disquisitions on the subject we have seen.

That part of the work which relates to mental diseases, their causes, varieties, pathology and treatment, stands in a certain manner by itself. The subject of insanity of early life we have never seen so well treated. Bare allusions are made, it is true, in reference to this in the child; but very few physicians are

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probably aware of the possibility of mania, epileptic insanity, melancholy, moral insanity and the like in children of very tender age; if observations have been made of this kind, at least very little value has been attached to them. Of course, insanity in children must be of the simplest kind, for the mental faculties have not as yet been trained, and the disorders must equally be without method. It would be injustice to the author to take this point or that and illustrate it, or call it in question; the work must be carefully read and studied to enter fully into the conception of the unity of the whole.

We repeat, it is an admirable production; such as the thoughtful would wish to preserve for constant use. We wish that it may have a wide circulation, to dissipate the mists which at present enwrap the minds of most men in reference to this subject of insanity.

The book can be obtained at any of our book stores.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF KANSAS, for the year 1867, being its third annual meeting, held at Leavenworth, April. 1867.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY, at its seventeenth annual session, held at Indianapolis, May, 1867.

TRANSACTIONS OF THE TWENTY-SECOND ANNUAL MEETING OF THE OHIO STATE MEDICAL SOCIETY, held at Yellow Springs, Ohio, June, 1867.

The transactions of the above State societies are before us, and in looking over their contents, are gratified to find so much harmony displayed in the profession, so much energy and industry manifested for the general good; at the same time a feeling akin to mortification arises that our sister States, one of them at least so much younger, have outstripped us in the race. What are we doing for the profession or for the science of medicine? Our county societies we rarely hear from, our city societies we hear from; but, so far as any good arises, it is *vox et præterea nihil.*

In the transactions of the Kansas Society are excellent reports from the Committee of Surgery, by M. Bailey, M. D.; on Obstetrics, by C. A. Logan, M. D.; on Climatology, by T. Sinks, M. D. There are well written essays on the Therapeutic Uses of Water; on Diphtheria; on Malarial Miasm; Cases of Poisoning by Arsenic; of Femoral Hernia; of Infantile or Oblique Frac-

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ture of the Vertebra; on the Use of Persulphate of Iron in Hemorrhage; all indicative of the enthusiastic spirit which pervades the profession there.

In the transactions of the Indiana State Society we read a very excellent address on Physic and Physicians by the President, Dr. Vierling Kersey, Richmond, Ind.; a superior Essay on Bile, by Dr. J. F. Hibberd, Richmond; Statistics in Relation to Foreign Bodies in the Air Passages, by Dr. J. R. Weist, Richmond; a thorough Report on Cholera, by Dr. G. Sutton; an article on the Collapsed Stage of Cholera, by Dr. W. S. Raymond; an article on Cerebro-Meningitis by Dr. J. Moffet; a very sensible Essay on Female Doctors, by Dr. D. Clark; a paper on Tracheotomy, by Dr. R. E. Haugeton; also a paper on Epidemic Dysentery, by Dr. H. P. Ayers. This society has been in operation for seventeen years.

Ohio is not behind-hand. In the twenty-second annual meeting there is an interesting report on the Treatment of the Incurable Insane, by Drs E. Pearce and B. S. Brown; papers on Medical Ethics, by Dr. G. W. Harris; on Cholera, by Dr. J. Davis.

We have no space to analyze these various papers of the above societies. They all contain valuable information from men who have worked out the questions before them. We look at home and find but little animus pervading the profession; it has been held as our opinion that associations are of benefit for only a limited few. But, after all, physicians will congregate; they are social in their habits, and it wants but an object to give point to their animus, and this object may very well be an association, instances of which we have given above. If the one feeling predominate in these meetings, to advance the science of medicine, ignoring partisan spirit or selfish motives, how much can be accomplished by these societies. Our old State organization had its influence. There are those in our State who look back with pleasure to its meetings, and who, no doubt, would contribute again to its life if once reorganized. We are glad to see the initiative taken by our St. Louis Society to bring about this re-organization. Over a year ago we called upon the

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profession in this State to act in the matter, and now that time and place are at hand, we hope our city doctors will move cheerily to the work before them. Much depends upon them, upon the interest which they will manifest. Important subjects will be at hand for the Society to consider, not the least will be the effort to approach the legislature on the question of medical education. It concerns the profession of the State to act, and right speedily. Let a general response be made to the call which we herewith append. We suppose the committee is actively engaged in correspondence with our country members. On another occasion we wish to say more on the questions which will naturally arise before this new body. Again we say, let every district society, every county be represented, if only by one individual.

To the Medical Profession of the State of Missouri:

At a meeting of the St. Louis Medical Society, held on the 26th of October, the undersigned were appointed to invite the physicians of the State of Missouri to meet in convention, at 12 M., on the second Tuesday of December, 1867, for the re-organizing of the MISSOURI STATE MEDICAL ASSOCIATION. Local and County Medical Societies will please forward the names of all delegates. Where no Societies exist, all physicians who are graduates of a regular school in good standing are cordially invited.

MONTROSE A. PALLEN, M. D. JAMES R WASHINGTON, M. D.
ED. MONTGOMERY, M. D. J. M. YOUNGBLOOD, M. D.
R. S. ANDERSON, M. D. G. F. DUDLEY, M. D.
JNO. J. McDOWELL, M. D.

AN ADDRESS ON DENTAL EDUCATION, BEFORE THE CHICAGO DENTAL SOCIETY. By H. E. PEEBLES, D. D. S., Professor of Operative Dentistry in the Missouri College of Dental Surgery.

We are indebted to the author of this very able address on the subject of education for some excellent ideas, as well on the specialty of dentistry as on medical and general education. A short sketch of the progress of dentistry in this country will awaken the surprise of those who have thought little on the matter. The writer very justly remarks that dentistry is as worthy the name of a specialty as any other branch of medicine

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which has been in like manner worked up. Worked up is the expression, for no men have labored more ardently in their particular branch than the dentists. We are glad to see them taking the present stand, and we would like that there should be more community of feeling between the physician and the dentist. There need not be other than the most perfect harmony in their separate pursuits. After all, the physician must teach the foundation principles of medicine to the dentist, who builds thereon the superstructure of his own individual practice. Dr. Peebles has the right ideas on the subject of medical education, as also on the necessity of some preliminary education for students of medicine and dentistry. We approve heartily of his views on this matter, and knowing his sincerity and that he is one of the representative men of his profession, we look now upon this specialty, even if we had not judged so before from the dental journals and the proceedings of the dental societies, which we examine with much interest, as truly worthy the high grade it assumes for itself.

The address is very well written and should be widely circulated for the real value of its thoughts.

SECOND ANNUAL REPORT OF THE STATE BOARD OF AGRICULTURE TO THE GENERAL ASSEMBLY OF MISSOURI FOR THE YEAR 1866.

FIRST ANNUAL REPORT OF THE COMMISSIONER OF STATISTICS TO THE GENERAL ASSEMBLY OF THE STATE OF MISSOURI for the year 1866.

We are indebted to the kindness of Spencer Smith, Esq., for copies of the above reports. They are interesting to every inhabitant of Missouri, as containing very valuable and necessary information concerning our State. We notice the very extensive and invaluable reports on Climatology by Dr. G. Engelmann and Dr. A. Wislizenus, and equally important, by Prof. C. G. Swallow, a report on the Physical Geography of Missouri.

The reports from the Blind and Insane Asylums and from the Public Schools, the farm Statistics, the Proceedings of Agricultural Societies, and the Census of the State, are all so much useful knowledge, that shows we have made rapid strides in the race with older and more favored States.

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Obituary.—We are pained to announce the decease of Dr. Richard E. Bland, who departed this life on Tuesday, the 5th inst., at the age of fifty-six years. Although but a comparatively short time in the city (he was, however, very widely known in the country, having practiced there, if we mistake not, at least a quarter of a century), yet he had endeared himself to a large circle of friends, even outside of the profession; by his urbanity, his honesty of purpose in all his doings, by his intelligence and by his skill as a practitioner, he was truly an example of the physician, actuated by the highest motives toward his patients and his professional brethren; but above and beyond all, he was the Christian—this was the secret spring of all his actions. His loss will be sincerely mourned by all who knew him; the profession will sadly miss his genial presence and his honest advice. We append from the records of last meeting of the St. Louis Medical Society the following preamble and resolutions:

WHEREAS, It has pleased Almighty God, in the dispensations of His providence, to remove from amongst us, by death, our esteemed friend and brother Dr. Richard E. Bland, who departed this life on Tuesday, the 5th inst.; therefore,

Resolved, That in the death of Dr. Bland this society has lost one of its most active members, and a zealous co-laborer in the cause of science, truth and benevolence.

Resolved, That we tender to his bereaved family our sincere sympathies in their untimely affliction, and condole with them the loss which they have sustained in the death of an affectionate husband and father.

Resolved, That a copy of this preamble and resolutions be presented to the family of the deceased, and to the medical journals and daily papers of the city.

A. HAMMER, M. D., *President.*

R. S. ANDERSON, M. D., *Recording Secretary.*

Hospital Reports.—The medical and surgical staff of the Pennsylvania Hospital will issue next year a volume of reports.

An annual volume of reports, from the Bellevue Hospital, will be issued by the medical and surgical staff of the hospital.

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The Half-Yearly Compendium of Medical Science—Being a synopsis of Practical Medicine, Surgery and Medical Literature. The first part of this work will be issued from the office of the *Medical and Surgical Reporter* on the first of January, 1868. It will comprise about 300 pages royal octavo size, and will contain a well-prepared synopsis of the articles in the medical periodicals and monographs, and a general review of the medical literature of the preceding six months, both of this country and Europe.

We earnestly hope that this national undertaking will be heartily supported by the profession. All who are willing to subscribe are requested to send their subscriptions to this office before the 10th of December, as the size of the edition of the first number will be governed by the encouragement we receive. Subscriptions will be received at the following rates: Compendium, per annum, two numbers, $3 00; single number, $2 00. Address Drs. BUTLER & BRINTON, Editors, 115 South Seventh street, Philadelphia.

We would call the attention of our readers to the above work, and earnestly recommend it as worthy their patronage. It is an American undertaking, and should receive the support of the profession of this country.

The Department of Medicine and Surgery of Willamette University, Salem, Oregon, sends us its second annual announcement for the winter course of 1867–68, commencing in November and continuing four months. We congratulate the University on its so-far successful effort to develop the professional interests of the very far West, and trust that its progress will be commensurate with the enterprise which is exhibited. We would suggest that, as soon as possible, it lengthen its course to the usual time of Eastern medical schools. It would certainly be more profitable for the student and more in harmony with the general plan of medical education. We can hardly yet expect that it should stand in the front rank of progress in medical education as at present proposed, but at least it can come up to the old stand-point. Again we wish the institution all success.

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Winter Retreat for Consumptives.—A large house is being fitted up in Jacksonville under the superintendence of Dr. Prince, heated by furnaces, so arranged as to admit of the purification and medication of the air of the house, producing an artificial climate, not only favorable for the most speedy recovery of patients undergoing surgical treatment, but also adapted to secure the best atmosphere for those affected or threatened with pulmonary affections.

It is expected that the repairs and alterations necessary for this purpose will be completed by the first of December. For further particulars, address DAVID PRINCE, M. D., Jacksonville, Illinois.

We heartily commend the above undertaking of our old friend, Dr. Prince; and the announcement that the institution is to be under his supervision will be sufficient assurance of its usefulness. We trust that the establishment will be eminently successful, and amply repay the Doctor for his outlay and personal attention.

Remarkable Rain Fall.—During August rain fell in Philadelphia on twenty days, and the entire rain fall amounted to 6.84 inches, while in 1866 the amount of rain during the same month was only 2.56 inches, and the average of seventeen years was 4.52 inches. During the summer of 1867 the rain fall was 30.82 inches; in that of 1866 8.47 inches, and the average of sixteen years 12.86 inches.

Carbolic acid in diphtheria.—Formula, *R*— acidi carbolici, m xx; acidi acetici, f ʒ ss; mellis, ʒ ij; tinct. myrrhœ, f ʒ ij; aquæ, q. s.; M. et fiat gargarisma, f ʒ vj.

A medico-legal society, composed of members of the medical and legal professions, has been formed in New York, its object being the discussion of matters pertaining to forensic medicine.

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Dr. James W. McLane has deen appointed Lecturer upon Materia Medica at the College of Physicians and Surgeons, New York, vice Dr. Bumstead, who has accepted the Professorship of Venereal Diseases in the same College.

The Rush Medical College has lately inaugurated its new building, which, from all accounts, is one of the most convenient in the United States.

VITAL STATISTICS OF ST. LOUIS.

From October 1, to November 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	471	Still Born	82
White Females	402	Under five years of age	341
Colored Males	20	Between five and twenty years	114
Colored Females	22	Between twenty and forty years	247
Born in the United States	611	Between forty and sixty years	126
Born in Germany	156	Between sixty and eighty years	47
Born in Ireland	111	Bet. eighty and one hundred y'rs	8
Born in other countries	87	Total	915

DISEASES.

Accidents	8	Fever Intermittent	15
Abscess	2	Fever Remittent	11
Apoplexy	10	Fever Congestive	15
Atropia	5	Gangrena	1
Albuminaria	2	Gastritis	5
Bronchitis	5	Hepatitis	14
Burns	1	Hemorrhage	5
Carditis	2	Hydrothorax	1
Cancer	2	Hydrocephalus	10
Cerebritis	9	Laryngitis	4
Cholera Morbus	270	Marasmus	29
Cholera Infantum	72	Meningitis	30
Convulsions	35	Old Age	2
Congestion of Brain	22	Premature Birth	6
Croup	5	Paralysis	5
Diarrhœa	50	Peritonitis	8
Dysentery	42	Poisoning	2
Dentition	9	Pertussis	9
Dropsy	2	Phthisis	81
Diphtheria	3	Pneumonia	24
Delirium Tremens	5	Rheumatism	2
Disease of the Heart	2	Rubeola	4
Enteritis	10	Scarlatina	5
Erysipelas	5	Scrofula	2
Eclampsia	1	Suicide	1
Fever Typhoid	30	Syphilis	2
Fever Bilious	14	Trismus	7
Fever Puerperal	5	Tetanus	5

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THE SAINT LOUIS
MEDICAL REPORTER,
A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, DECEMBER 1, 1867. No. 19.

HERPES OF THE VULVA.

[From the French of Dr. F. L. Legendre.]

Translated for The St. Louis Medical Reporter.

Herpes is a cutaneous affection, characterized anatomically by globular elevations of the epidermis, of the size of a grain of millet, filled with a yellowish serum, perfectly transparent, and surrounded by an areola, slightly roseate; it appears most usually in groups of six or eight vesicles, though sometimes isolated. This disease has been attentively studied by dermatologists of the present century, who have cleared up, by their efforts, the obscurity which has hitherto surrounded the pathology of the skin.

According to the volume, the site and disposition of the vesicles, several varieties are admitted under the names of herpes phlyctenoides, zoster, preputialis, circinnatus, iris; they are the varieties adopted by Willan, Bateman, Biett, Gibert, Schedel and Cazenave. Biett directed the attention of the profession particularly to herpes preputialis, as many grave mistakes had been made as to its character, whether in the acute or chronic stage, as also in its treatment—mercury being useless, and above all injurious in a disease by no means venereal. It is a little singular that Biett (that acute and observing inquirer) should have passed by in silence the analogous vesicular eruptions, which are occasionally developed upon the vulva, and principally upon the labia majora; above all, since he had devoted

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so much attention to the eczematous, pruriginous and lichenoid affections of this locality, their obstinate persistence and the violent and painful pruritus to which they give rise, and had pointed out the treatment appropriate in each kind of eruption. Probably the time and the place in which the observations were made by Biett, the nature of the maladies which he treated, the circumstances which develop herpes of the vulva, the transitory nature of the eruption, and the mildness of the disease might very easily have conduced to evade the eye of the observer.

As herpes of the vulva is not very frequently met with, it is only in the hospitals which receive exclusively women affected with simple or specific diseases of the genital organs, as at Louvcine, or at St. Lazare, that we have occasion to observe this kind of eruption. During the last ten years of his life, from 1830 to 1840, Biett had under his charge male patients only, and when, before this period, he had besides a few female patients, the practice of using the speculum had hardly come into frequent use. Hence we can understand why herpes of the vulva, an eruption rapid in its course, and appearing frequently at the approach of menstruation, a time when the patient would naturally conceal her complaint, should have escaped the observation of this acute physician, as well as of most dermatologists.

Alibert, in his monograph on diseases of the skin, is the first who speaks of herpes of the vulva, notwithstanding, says he, the inconvenience of multiplying species, this should attract our attention, because it is often seen in practice, and because it often gives rise to grave mistakes with those who look upon it as a syphilitic symptom. This species, continues Alibert, has been called progenital, from occupying most always the limits which separate the interior from the exterior tegument in the organs of generation; we observe the disease very frequently in the prepuce of the male, or on a part just within the labia majora of the female. If the disease be not often seen, says Alibert, it is in consequence of the natural modesty of the sex which is affected by it; but whether upon the prepuce or the labia, they both have the same signification; they run their course in seven

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or eight days, and after drying up in one place they reappear in another. It is this tendency to return, which is the source of disquietude to the patient. After describing the vesicular character of the eruption, the sero-purulent transformation of the liquid in the vesicles, then its desiccation in the form of crusts, which rest for some time upon a reddish or livid surface, Alibert goes on to say that the disease is not always benign, and that the skin may ulcerate to a greater or less depth, which may be attributed to the individual temperament, which is more or less changed by anterior or chronic diseases. He instances a neglect of hygienic measures, soiled linen and excessive coitus as the ordinary causes of this eruption, whether as originating it or producing a relapse. Finally, he remarks that its site often alarms the patient, supposing it to arise from syphilitic contamination.

Rayer, Monneret and Fleury add nothing to the description given by Alibert. Huguier, in his remarkable memoir upon the diseases of the secretory apparatus of the external genitals of the female, gives only a few words to the description of herpes of the vulva; but latterly he has devoted his attention particularly to herpes of the vulva, and will, no doubt, give the different characters of this interesting disease, particularly as relate to the diagnosis.

Before giving the description of the general and differential characters of herpes of the vulva, such as have been observed in the hospital, I propose to show how important is the study of this disease, and how deeply interested are the patient, the physician, and sometimes even the law in which diagnosis can surely decide. If, for example, in consequence of the violence which is inseparable from the attempt at rape, or its perpetration, there were developed eruptions or ulcers upon the vulva, it would certainly be of the highest importance for the patient that the true nature of these accidents should be determined. It is true that under a proper treatment a syphilitic taint may be eradicated, still the cases may be refractory, without considering that we never can be assured absolutely that there will never ultimately appear symptoms of a secondary or tertiary charac-

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ter; hence it is of the utmost consequence to know whether the disease be syphilitic or merely ulcerations of a non-specific nature, the result of a simple herpes of the vulva.

The physician, as well as regards prognosis as the treatment, is equally interested in the result of his diagnosis; it is true that non-indurated chancres, a variety with which alone the ulcerations, which succeed herpes of the vulva, may be confounded, are treated by many physicians without mercury, some believing that the simple chancre can not give rise to a constitutional infection; others, less exclusive, thinking that this variety of chancre gives rise to it occasionally only, waiting for the appearance of secondary symptoms before administering mercury; still, whatever the doctrine, it is important that a mercurial treatment should not be directed against a disease which has no specificity—no virulence. Finally, when the physician is called to express an opinion before a magistrate upon the nature of the ulcerations which have appeared several days after an attempt at rape, it is of the greatest importance that he should not commit an error of diagnosis, of which every one can comprehend the import. In fact, if it be the duty of justice to punish the guilty, it should, on the other hand, proportion the punishment to the extent of the crime, and not punish the culpable as having as well infected as violated his victim, when the syphilitic infection is rather apparent than real.

Herpes of the vulva may assist us in substantiating the doctrine that constitutional syphilis rarely, some authors say never, succeeds non-indurated chancres—a proposition whose truth, more apparent than real, rests for the most part, I believe, upon the frequency of non-virulent ulcerations, but apparently syphilitic, which herpes and other diseases produce upon the vulva. In other words, the ulcerations which succeed herpes or folliculitis, &c., often resemble, so as to produce mistakes, non-indurated chancres of the vulva; the resemblance is oftentimes so great that it becomes necessary to have recourse to inoculation to decide the question in a positive manner. If, therefore, inattentive to the precision of diagnosis, we characterize by the name of chancre all the ulcerations, which are clearly cut or

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punched out, and of a grayish color at bottom, appearing upon the vulva—and their number is larger than might be supposed—we run the risk of considering as non-indurated chancres ulcerations which have no specific or virulent character; hence we can understand how, with a certain show of reason, it has been maintained that simple non-indurated chancres have been so rarely, or even never, followed by constitutional syphilis. These pretended chancres not being ordinarily virulent, it is not surprising that they were not followed later by constitutional syphilis. On the contrary, an ulceration, however superficial, if it be specific, may give rise to constitutional symptoms as well characterized as if it arose from an indurated chancre. Such is the opinion of my friend and colleague, M. Cullerier, who has related to me many incontestable facts of constitutional syphilis succeeding to chancres quite superficial.

These considerations I have thought proper to bring forward to show the importance of herpes of the vulva and the doctrinal and medico-legal questions to which the nature of the disease might give rise. I shall speak now of the disease in detail, and shall dwell upon the general and diagnostic characters which appear to me as very important.

Etiology.—Predisposing and occasional causes favor the development of herpes of the vulva. These two orders of causes may act separately; most usually, however, they act in conjunction. Among the predisposing causes are to be noticed obesity, in the warm seasons of the year, a natural acridity among certain women of the secretions of the vulva, the menstrual epoch, pregnancy. With very fat women the crural genital folds, by the relief which the internal and superior part of the thighs, touching each other, form, present a very marked depression, and constitute a cavity as it were in which are lodged the labia majora, such a disposition of the parts which are the seat of an active secretion would very readily develop herpes of the vulva. So among certain females, with whom the perspiration and the mucous and sebaceous secretions are naturally very abundant, acrid and fœtid, the warm season would naturally predispose to this disease.

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The approach of the menstrual period predisposes also to herpes of the vulva; at this time, in fact, the vulva participates in the sanguineous congestion of the organs in the lower part of the abdomen, furnishes a glandular secretion more active, and becomes often the seat of pruritus, more or less intense, circumstances which sufficiently explain the tendency to herpes at this time. Thus certain females, a day or two before each menstrual flow, are attacked with an eruption of herpes, characterized by one or more groups of vesicles, which desiccate at once, or rupturing give rise to superficial erosions. These erosions persist during the periodical hemorrhage and cicatrize without leaving any trace a short time after the cessation of the catamenial period.

Finally, pregnancy, by determining a congestion of the pelvic organs, shown by the discoloration, sometimes almost black, of the mucous membrane of the vagina and vulva, and accompanied by a creamy secretion, it may be muco-purulent, predisposes to herpes.

Vaginal discharges are a frequent cause of this disease, but only when by their abundance and their purulent nature they bathe the vulva, irritate it, and thus provoke a pruritus, which the patient seeks to relieve by scratching with the finger nails, or chafing with the chemise, which is soiled and hardened by the dried discharge. The eruption appears directly after this rough and repeated scratching.

Another occasional cause is want of cleanliness, which acts almost in the same manner as the purulent discharge. In fact, this inattention to cleanliness, by producing a prolonged contact of the sudorific, mucous and sebaceous secretions, which are so active in this region, favors their transformation into altered products, which, naturally enough, give rise to the eruption. Long and frequent walks often give rise to herpes of the vulva by the continual chafing that occurs between the vulva and the internal and superior parts of the thighs, and by the increase and alteration of the secretions which lubricate these parts. It may be said, however, that this cause is more frequent among

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women of considerable *embonpoint*, and also more particularly in the warm weather.

The last occasional causes that may be mentioned are, among women, the excess of coition, and with young girls masturbation and attempts at violation, which consist usually in more or less rough and prolonged efforts to produce the orgasm. It is important, however, to bear in mind that this cause is often complicated with the concomitance of a vulvo-vaginal discharge, whether this discharge depends upon violence, or has been communicated. Whatever be the nature of it in the production of herpes, we must add, to the action of violence, the contact with the delicate epidermis of these parts, the acrid and irritating matter of the discharge.

General Characters of Herpes of the Vulva.—Herpes of the vulva presents itself under two different aspects, according as it consists in one or two groups of vesicles; or, on the other hand, of a great number of scattered or aggregated vesicles. In the first instance, the labia-majora are neither red nor tumefied; the inguinal glands are not increased in size; the patient does not complain of pain, but only a slight heat in the point occupied by the eruption. The disease is rarely seen at the outstart, when it is marked by a group of five or six globular vesicles of the size of a grain of millet, filled with a yellowish serum, perfectly transparent and surrounded by an areola of a roseate hue more or less extended; most usually the vesicles are already flattened, wrinkled, ruptured, filled with a lactescent serum, or they are spread out, confluent, forming a bullous elevation of the epidermis. In fine, frequently the vesicular or bullous aspect of the eruption has disappeared when we come to examine the patient; the disease is then manifested by a very superficial erosion—rounded, grayish—surrounded by a roddish areola, and situated either in the external or internal face of the labia-majora. This erosion, which results from the rupture and the elevating of the epidermis on a level with the vesicles, and between them, might be taken for a chancre, particularly when situated near the entrance to the vagina or the fourchette.

When herpes of the vulva occupies numerous points on the

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external and internal face of the labia-majora, or the perineum and the margin of the anus, the patient will complain of a violent burning sensation, and of acute pain at the external genitals. This pain is increased on urinating or in walking, which is rendered almost impossible, so great is the suffering. On examination, the labia-majora are found more or less red and swollen, as well as the margin of the anus, when this region participates in the disease; what particularly strikes the attention is the presence of numerous ulcerations upon the internal or external face of the labia-majora, or occupying principally their free border. Sometimes these ulcerations are limited to the vulva, sometimes the margin of the anus, the perineum and even the internal and superior surface of the thighs at points corresponding to the free edge of the labia-majora, present similar appearances. Whether these ulcerations be covered with a brownish crust or not, they discharge a sero purulent or purulent fluid, and in all cases have the following characters: The ulcerations are, in general, superficial erosions, rather than ulcerations; they are regularly rounded, with sharp edges and grayish at the bottom; of the size of a very small lentil when isolated, more extended and irregular when run together. Although in general these ulcerations are superficial, involving only the various layers of the epidermis, some among them resemble chancres, by their elevated and sharp edges and grayish depths. What may still farther deceive is the development in the corresponding surface of the thighs, small rounded ulcerations, with the bottom of a grayish color, which seem to be the result of inoculation, while it is nothing but the contact of an irritating fluid on two surfaces, which correspond to each other and touch.

In pursuing our investigations, it is rare that we do not meet with other lesions which clear up the nature of the ulcerations; such is the presence of isolated vesicles, but more frequently grouped to the number of five or six (globular), of the size of a grain of millet, distended by a yellowish, transparent serum, and surrounded by a rose-colored areola. When these vesicles are a day or two old their character changes; the serum becomes milky, the epidermis wrinkles and then is ruptured; then the

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superficial layer of the derm-membrane is laid bare, and we thus reach by insensible modifications from the commencing vesicle to the ulceration, more or less deep. Sometimes the vesicle, instead of rupturing singly, enlarges and runs into another, and gives rise to a bullous elevation of the epidermis, which ruptures in its turn, and is often covered with a pseudo-membranous layer. At other times the enclosed fluid becoming sero-purulent concretes in the form of a brownish crust of the size of a hemp seed, which covers a subjacent ulceration. When the groups of herpes exist on the internal face of the labia-majora at the margin of the anus, or on the perineum, their presence is easily ascertained; but if at first they be not discovered, it is proper, before denying their existence, to examine carefully the external face of the labia-majora—to stretch the skin of these parts, in order to efface the folds in which the vesicles are often hidden; we then clearly see isolated or grouped vesicles which were concealed by the peculiar structure of the parts. I have almost always found characteristic vesicles in the midst of numerous ulcerations; however, this character may disappear in the end when the ulcerations are prolonged by uncleanliness, or acrid, viscid discharges. But such cases are rare, for the causes continue to engender new vesicles. When the vulva presents several groups of vesicles, the lymphatics of the groin are swelled and a little sensible to pressure; tumefaction and sensibility are so much the more pronounced, as the eruption is extensive and has given rise to more numerous and deep exulcerations. This engorgement, which may reach the size of a pigeon's egg, is not prominent; it is appreciated rather by the touch than the sight. I have never seen it accompanied by redness or suppuration, only its complete resolution is slow, and does not take place for several days after the cicatrization of the ulcers.

Progress and Termination of Herpes of the Vulva.—Whether the vesicles of herpes have given rise to superficial ulcerations, or the sero-purulent liquid contained in the vesicles has concreted in the form of crusts, under the influence of a proper treatment, the disease most usually is cured. The grayish appearance at the bottom of the ulceration disappears at first very

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rapidly; it is often replaced the next day by a roseate hue, then the edges subside, the surface grows pale and dries, and at the end of four or five days the ulcerations are healed. The site of the ulcers is indicated for several days by a slight reddish depression, which grows paler, and is completely effaced if the derm-membrane be not destroyed.

This is the general rule of cure. There are, however, exceptions; whether by their locality or by their depth, the ulcers may last for ten or fifteen days, even more, and leave a cicatrix on healing—indelible—or disappearing after a length of time. These ulcers may be mistaken for non-indurated chancres, if we do not call to mind their manner of evolution, or if we have not ascertained their freedom from virulence. There is a manner of transformation of herpes which may be confounded with the tubercular form of secondary syphilis; it is seen in cases where, before rupturing, the vesicles are run into one large bulla. Sometimes the denuded surfaces are covered with a grayish pseudo-membranous production—smooth and slightly elevated—characters which give rise to some analogy to the mucous tubercles in complete activity. However, what distinguishes them is, that the prominence of these ulcerations depends rather upon the considerable thickness of a false membrane covering the denuded surface of the derm-membrane than upon a true hypertrophy of the skin; the grayish appearance is due to the presence of a pseudo-membranous deposit, and not to an unequal, sanious, grayish erosion, making an integral part, as with the mucous tubercle of the diseased surface itself. Finally, the kind of secretion furnished by the ulcers of herpes is serous and transparent, not purulent, sanious and fœtid, as in mucous tubercle.

Sometimes the ulcerated surfaces, which succeed the herpes, present a decided relief above the surrounding healthy skin, and appear under the form of small, rounded spots, slightly elevated, the centre of which, reddish and humid, gives out a serous, transparent exhalation, while the epidermis, already repaired at the circumference, forms a zone of about two fifths of a line in breadth. In this form we might mistake these ulcers for chancres in process of cure, and later for mucous-tubercles in pro-

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cess of resolution, when the epidermis is repaired as well at the center as at the circumference. This hypertrophied disposition which the skin of the labia-majora presents at the surface which has been occupied by ulcerated groups of herpes, sometimes tends to increase after complete cicatrization. If these give rise to rounded or oval tumors of the size of a lentil or more, of a violet color, flattened or slightly convex, and rising above the surrounding surface about two or four fifths of a line, we might suppose an eruption of mucous-tubercles. But would not these mucous-tubercles, which we rarely ever see evolved, rather follow herpes, the vesicular eruption being the elementary lesion? Or, without assuming this explanation, which fails before the rapid cure of ulcers from herpes, would not these ulcerations, which succeed herpes, in a person of syphilitic diathesis, be an occasional cause of mucous tubercle? But these suppositions disappear before a continuous observation. In fact, these spots, after having persisted for three or four weeks with the same characters without ulceration, and without giving rise to a sanious, grayish and fœtid exhalation, as in the instance of veritable mucous tubercle, gradually and spontaneously disappear, without our being able to appreciate the reason of their disappearance any more than of their development or persistence. This spontaneous disappearance is at a moment when we were about to institute a specific treatment on the supposition of the existence of a venereal poison. It is enough to be warned of this analogy to maintain a cautious reserve as to their nature, and to delay a little before beginning a specific treatment, which might be useless.

[To be continued.]

Obituary—George Getz Shumard, M. D.—We regret to announce the death of this eminent geologist and physician. He died in Cincinnati, on September 29, of general paralysis. Dr. Shumard has long been known in the scientific world as a geologist, and was connected with several scientific expeditions under the direction of the U. S. Government; also State Geologist of Texas. He was well known in this city, where he had many friends who lament his loss.

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TREATMENT OF WHOOPING COUGH IN THE LONDON HOSPITALS.

Every old woman has a certain cure for whooping cough There is probably no ailment which has offered a finer field of enterprise to the empiric. It will be seen that the experience of our hospital physicians is for the most part against curative effect of any remedy in this complaint, although due credit is accorded to the relief which may be given by the use of certain drugs.

St. Thomas' Hospital.—In the department for children's diseases at this hospital cases of whooping cough have been unusually numerous during the past eighteen months. For the most part the cases presenting themselves have been of from one to three weeks' standing, although not a few cases which have lasted for as many months apply from time to time for treatment. As a rule, the more recent cases are complicated with a varying amount of bronchial catarrh—the catarrh, that is, of the first stage, lingering on and not unfrequently increasing after the pertussis has become fully developed; and the treatment pursued by Dr. Gervis in these cases has, therefore, generally a a necessary reference to this condition. The usual prescription, for instance, for a child of four years would be more or less as follows:—P. L. Solution of acetate of ammonia, half an ounce; spirit of nitric ether, one drachm; chloric ether, half a drachm; oxymel of squills, one drachm and a half; syrup of tolu, two drachms; water to two ounces; two teaspoonfuls every six hours. In addition to this medicine, of which the chloric ether is the permanent element, and the other constituents the variable, Dr. Gervis lays much stress upon the use of the chloroform liniment, directing that it is to be rubbed into the chest, both anteriorly and posteriorly, night and morning. Under this treatment, and with the usual directions as to diet and regimen, there is almost invariably considerable improvement within a week; and very frequently within ten days or a fortnight the "whoop" has quite passed off, although some amount of cough may linger for a little while, and require appropriate treatment. In more chronic cases, and where there is little or no bronchial disturb-

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ance, alum is substituted for the saline in combination with chloric ether; and, as in the other class of cases, the chloroform liniment is employed externally. If in cases where the catarrhal symptoms have subsided, but where the whoop remains, there should be much debility, the combination of quinine with the alum and chloric ether is very advantageous. If symptoms of cerebral irritation, with or without convulsions, should occur, Dr. Gervis has repeatedly obtained the greatest advantage from small doses of morphia; and this both in cases where no remedial measure for the complication has been previously tried, and in others where antiphlogistic treatment—leeches, calomel, blisters—has been assiduously but unavailingly adopted. In many such cases this medicine has acted as a charm, quieting both the pulmonary and cerebral disturbance.

St. George's Hospital.—Dr. Dickenson says we neither know its seat nor its antidote. It runs its appointed course regardless of the Pharmacopœia. A more or less persevering trial of most of the remedies which have been urged as able to cut short the disease has resulted in failure. Expectorants, remedies reputed as antiphlogistic, drugs which have no repute except as cures for whooping cough, irritating applications, including Roche's embrocation, alum, nitric acid, bromide of ammonium—these and others have been tried by Dr. Dickinson, and found wanting. As regards the disease in question, such remedies may be divided into two classes—those which do harm, and those which do good. Antimonials, and all such remedies of the depressing class, appear to be injurious by lowering the patient without touching the disease; while the most that can be said for nitric acid and bromide of ammonium is, that where they are given in small doses they do no obvious mischief. Whooping-cough appears to be as essentially incurable as typhus or any of the specific fevers. At the same time, good may be done by meeting urgent symptoms as they arise, and by directing treatment to the various complications which are apt to endanger the patient.

When the spasmodic cough is violent and threatening, as is apt to be the case in the later stages of the disease, medicines

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which act as sedatives may be given with advantage. Opium is sometimes useful under these circumstances, sometimes belladonna; hydrocyanic acid is better than either. The dilute acid of the Pharmacopœia, in minim or half-minim doses, according to the age of the child, is more effectual than anything else in diminishing the laryngeal spasm, which is often a source of danger.

King's College Hospital.—In the out-patient department of this hospital in the early stages of whooping-cough the simplest expectorants only are employed by Dr. W. S. Playfair. When the disease is more fully developed, the bromides either of potassium or ammonium (for there appears to be no marked difference in the action of the two salts) have been on the whole more frequently used than any other drugs. They have been generally given in doses of a grain for each year of the child's age, increasing the amount gradually if they seem to be of service. In a large number of cases the use of this medicine has been attended by marked benefit; often it has failed to be of service, even in cases apparently the best suited for its employment. The class of cases in which it most frequently proves beneficial are those in which the paroxysms are very frequent and severe, indicating much implication of the nervous system. In such it often quiets the convulsive cough in a most remarkable manner.

The next most useful remedy has been found to be belladonna, which is generally tried when the bromides have failed. In the more advanced stages of the disease, and in very feeble children, it has been found of much use given in combination with cod-liver oil and syrup of iodide of iron. In the weak and cachectic children that attend the out-patient department of a large hospital the use of some such tonic may be considered absolutely essential, and the above combination has been found to be very valuable.

Minute doses of hydrocyanic acid, generally combined with some preparation of bark, are sometimes serviceable It seems to act best in the efficacious. Its frequent failure may, perhaps, be in part ascribed to the care required in prescribing so powerful a remedy in out-door practice, where mistakes are necessarily

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frequent, and where the effects of particular drugs cannot be carefully watched.

The frequency of secondary chest complications has been remarked—the inevitable consequence of bringing the children to the hospital in all kinds of weather. It has been found that any depressing treatment is worse than useless when such complications arise, and that they are best treated by enveloping the chest in large linseed-meal poultices, or in damped cotton wadding and oiled silk, along with mild counter-irritating embrocations. Small doses of sesquicarbonate of ammonia and chloric ether have generally been given internally, with nourishing diet, and stimulants when necessary.

Westminster Hospital.—It is now some thirteen years since Dr. Gibb submitted to the notice of the profession his mode of treatment of whooping-cough by nitric acid in a monograph on that disease. A large experience of its use since then, both in public and private practice, has convinced him of its great value, and that he had not exaggerated its good effects. Its internal use he has found not only serviceable in curing the pertussal malady, but at the same time prophylac against intercurrent throat complications. His formula consists of an ounce of the dilute nitric acid, four drachms of compound tincture of cardamoms, and enough simple syrup to make a six-ounce mixture. For an infant the dose is a teaspoonful every three or four hours, and for children from two to five years of age two or three drachms at the same periods. Occasionally he has found it convenient to add an ounce of glycerine, diminishing the mixture by an equal quantity of the syrup is liked by the child, and is well borne, and the good effects are very speedily visible in diminishing the severity and frequency of the spasms. According to the frequency of the paroxysms, together with their violence, severity and duration, so is there soreness or uneasiness at the upper part of the larynx; this Dr. Gibb obviates by the topical use of a solution of nitrate of silver to the larynx (twenty grains to the ounce) by means of a curved brush.

The advantage of the nitric acid treatment is, that it can be given in the three stages of the disease. When the nervous ele-

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ment, however, is very strong, and there are manifestations of cerebral irritation, Dr. Gibb has substituted the bromide of ammonium for the nitric acid, in doses of from four to fifteen grains, according to age, combined with ipecacuanha wine and occasionally small doses of sulphate of zinc. Provided there are no dangerous or severe complications requiring special measures, it has been found that each of these two modes of treatment proves successful in curing the great majority of cases; and we are told it is somewhat unusual, unless when easterly winds are prevailing, for children at Westminster Hospital to remain longer under treatment than from two to five weeks. In very young children and infants, a few doses sometimes of the nitric acid mixture are sufficient to effect a cure; and if the little patients are carefully looked after, warmly clad, and properly fed, there is no recurrence of the disease.

In many hundreds of examinations Dr. Gibb has found the fact hold good, which he was the first to announce many years ago, that the urine in pertussis is almost invariably saccharine.

Foundling Hospital.—During the latter half of the year 1856, Dr. Julius Pollock tells us, an outbreak of whooping-cough occurred at this hospital. It commenced in July and terminated in September. There were in all 26 cases, the ages of the children being from three to six years. There were no deaths. The longest case was 103 days; the shortest 21 days; average, 50 days.

In the treatment the following were tried: Conium, bromide of potassium, dilute hydrocyanic acid, alum, antimony, ipecacuanha, compound tincture of camphor, and oil of amber. Inhalation of the vapor of chloroform; painting with iodide liniment (B.P.) along the track of the cervical glands. Emetics were generally given at the commencement (ipecacuanha powder, ten to twenty grains), and occasionally in the course of the disorder, if the chest seemed choked with phlegm.

The bromide of potassium was found to have no effect, nor did conium appear to have any advantage over opium. The iodine liniment to the neck did nothing. The vapor of chloroform seemed to check the spasm, but, owing to the difficulty of admin-

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istering it, was not much tried. No remedy appeared to shorten in any way the disease, but the most useful treatment was found to be the following: To keep the room warm (50° to 60°); to give emetics at the beginning, and, when necessary, occasionally during the disease; to keep the bowels freely open; and to give the following mixture three times daily: Dilute hydrocyanic acid, one to two minims; ipecacuanha wine, five to ten minims; compound tincture of camphor, ten to twenty minims; water, half an ounce.—*London Lancet.*

DISEASE PRODUCED BY SLEEPING TOGETHER.

During the night there is considerable exhalation from our bodies, and at the same time we absorb a large quantity of the vapors of the surrounding air. Two healthy young children sleeping together will mutually give and receive healthy exhalations; but an old, weak person near a child will, in exchange for health, only return weakness. A sick mother near her daughter communicates sickly emanations to her; if the mother has a cough of long duration, the daughter will at some time also cough and suffer by it; if the mother has pulmonary consumption, it will be ultimately communicated to her child. It is known that the bed of a consumptive is a powerful and sure source of contagion, as well for men as for women, and the more so for young persons. Parents and friends ought to oppose as much as in their power the sleeping together of old and young persons, of the sick and of the healthy. Another reason ought to forbid every mother or nurse keeping small children with them in bed; notwithstanding the advice of prudence, no year passes that we do not hear of a new involuntary infanticide. A baby full of life, health and vigor in the evening is found dead the next morning, suffocated by its parents or nurse.—*Exchange.*

CHANGE IN THE MOON'S SURFACE.

Astronomers are just now interested in a change lately observed on the surface of the moon. Our readers know that the inequalities on its surface are shown by the telescope to be

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real mountains and valleys, and that astronomers have given them names; among the mountains are several craters of extinguished volcanoes—one of them called the Crater of Linneus, which formerly showed a dark, deep impression in its centre. This has been filling up, and shows now an elevated, circular, white centre, and no longer a crater. It appears from this that the moon has not entirely lost its volcanic activity, or rather that it has not yet cooled down to its very centre, and that any cooling and subsequent contraction of its liquid core will interfere with its solid shell, and this will show itself by upheavals, where the crust is thinnest, and produce new volcanoes. For the same reason slow upheavals of mountain ridges take place on the earth to the present day, and even sudden upheavals, such as earthquakes. Volcanic action, however, appears extinct in the moon, and no observations on the dark sides have ever showed the least sign of fiery eruption, nor is their a trace of the least cloud, smoke or atmosphere.—*Exchange.*

FACTS ABOUT THE SUN.

The sun, says Herschel, in his lectures, is distant from the earth 92,000,000 of miles, its diameter is 850,000 miles, or more than one hundred times that of the earth, and its weight or power of gravitation is three hundred and fifty thousand times that of the earth. If placed where the earth is, its circumference would not only include the moon, which is 230,000 miles from the earth, but would reach out past it nearly as far again. A A man standing on the sun would be crushed flat by his own weight if he could stand the heat long enough. The heat on the sun's surface is equal to that which would be produced by burning six tons of coal per hour on each square yard. It is very much greater than would be required to melt any metals known on earth. The most brilliant light that can be manufactured by chemists looks like a black spot if looked at against the sun. The outer surface of the sun is composed of scales the shape of a willow leaf, and perhaps a thousand miles long. It is these that give out the light and heat. A great distance be-

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low this outer coat there is a layer of dark clouds, probably metallic. Again, there is a great space, and then another layer of still darker clouds, likely of the same material; another great interval, and then the solid surface of the sun. The sun travels about a million of miles a day, and yet in the last two thousand years it has not traveled one sixtieth part the distance to the nearest star. In fact there is hardly any perceptible change in its position among the stars, one of which—Sirius—is large enough to make two or three hundred like it.

A CURIOUS CALCULATION.

An exchange says: "What a noisy creature would a man be were his voice, in proportion to his weight, as loud as that of a locust! A locust can be heard at the distance of one-sixteenth of a mile. The golden wren is said to weigh but half an ounce, so that a middling sized man would weigh down not short of four thousand of them; and it must be strange if a golden wren would not outweigh four of our locusts. Supposing, therefore, that a common man weighs as much as sixteen thousand of our locusts, and that the note of a locust can be heard one-sixteenth of a mile, a man of common dimensions, pretty sound of wind and limb, ought to be able to make himself heard at the distance of one thousand six hundred miles; and when he sneezed 'his house ought to fall about his ears!' Supposing a flea to weigh one grain, which is more than its actual weight, and to jump one and a half yards, a common man of one hundred and fifty pounds, with jumping powers in proportion, could jump twelve thousand eight hundred miles, or about the distance from New York to Cochin China."

A USEFUL CALCULATING MACHINE.

A calculating machine is in use in the office of the Registrar General in London. Its operations are both accurate and useful, and in the last annual report of the Registrar there are numerous calculations involving a regular series, but by means of logarithms, questions involving calculations in the higher

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branches of mathematics can be reduced to very simple formulas, and brought into such a compass as will readily admit of their insertion in the machine. The machine was intended to perform only the operation of addition, but by various expedients it is made to perform also subtraction, multiplication and division. The machine has also been used to introduce the element of interest in the various tables. The preliminary steps of the work, such as calculating the mortality at decennial periods of age and deducing the difference, were performed without the aid of the machine, but when the differences were once obtained the machine was able to take up the work and continue the calculation in the differential method.

RUSSIAN STATISTICS.

St. Petersburgh has seven large civil hospitals: those of Aboukoff, Alexander, St. Peter and St. Paul, St. Mary Magdalen, Kalinikne, Mary and Vassili-Ostroff. The number of patients entering these hospitals increases yearly: in 1863 the number was 28,005; in 1864 it was 31,733; in 1865 it rose to 43,463, and last year to 45,027. The latter comprised the following diseases: Typhus fever, 8,398; chronic affections, 7,308; ague, 6,823; special affections, 4,370; cholera, 4,018; acute disorders, 10,595; surgical cases, 3,437; lunacy, 82. There were, owing to chronic affections, 2,762 deaths; to cholera, 1,645; to typhus, 1,585; to ague, 525; to surgical cases, 360, and to miscellaneous cases, 1,175. If we compare these results we shall find that typhus carried off more than one-fifth of the patients it had attacked; chronic affections about one-third; cholera about two out of every five; surgical cases somewhat more than one in 10, and ague one in 13.

MILES OF RAILROAD IN THE WORLD.

According to the *Financial Chronicle*, there is in the whole world 95,727 miles of railroad. Of this number the United States has 36,896; Great Britain and Ireland, 13,286; France,

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8,982; Prussia, 5,794; Austria, 3,830; Italy, 3,213; Russia, 2,775; British India, 3,379. Of European countries, Norway has the smallest number—43 miles. In South America, Brazil has the largest number, 433; and Venezuela the smallest, 32. South America has a total of 1,041 miles. Canada, with New Brunswick and Nova Scotia, has 2,438. Taking the world by divisions, North and South America and the West Indies have 40,866 miles. Europe has 50,117; Asia, 3,660; Africa, 375; Australasia, 3,007; or a total in the world of 95,727.

THE MEDICAL REPORTER.

ST. LOUIS, DECEMBER 1, 1867.

REVIEWS.

THE SCIENCE AND PRACTICE OF MEDICINE. By WILLIAM AITKEN, M. D Vol. 2, with additions by MEREDITH CLYMER, M. D. Philadelphia: LINDSAY & BLAKISTON. 1867.

We took occasion on the receipt of the first volume of the above very valuable work on the science and practice of medicine to speak in unqualified praise of its character and extent. The present volume renders this whole subject complete. The American editor has added seventeen new articles, equal to three hundred and thirty pages additional, on topics of great importance, some of which being little more known than from what we meet with in the medical journals. To select, for example, we have an excellent article on aphasia; on the sphygmograph; on inhalations in diseases of the air passages; on the delirium of inanition, &c., &c.

In the second volume we find the subject of medicial geography quite extensively treated. Though still in its infancy, this distribution of disease never has been studied sufficiently to give very valuable results. Thus we have been able to classify according to temperature diseases of a miasmatic or contagious character, such as plague, yellow fever, typhus fever, and the like. Thus we find reasons for continued fevers, for catarrhal and constitutional affections.

This work is a library in itself; it is a monument to the indus-

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try and intellect of the author; it will stand as the text book for the young physician; as the book of reference to the older man. It is an inexhaustible fount of information, from which we can draw, and still be unconscious of any labor which we may impose upon ourselves in examining its chapters.

INJURIES OF THE EYE, ORBIT AND EYELIDS. By GEORGE LAWSON, F. R. C. S., England. With numerous illustrations. Philadelphia: Henry C. Lea, Publisher. 1867.

A very excellent work on the above subject; not the of its merits being the illustration of each particular injury by characteristic cases. The most important points in reference to these injuries have been clearly portrayed, as well as far as relates to the immediate results, as to those changes which occur more remotely. It differs from most works on the eye, as being confined chiefly to wounds of every kind, and their results, and hence forms a most valuable production for the physician, who in an emergency may be able, with the information here given, to relieve the patient, even if he do not carry out the cure. How necessary it is for every practitioner to possess general principles in all branches of medicine, however wide they may be; it is impossible so thoroughly to specialize as to confine each specialist strictly within his own limits. This is the fault at the present day, of making every one run along in certain grooves, made by others or prepared by himself. Are not physicians too ready to give up all thoughts upon subjects which are appropriated for the special use of certain chosen ones. It is for the general practitioner that such works as the above are prepared, and we hope to see them widely circulated; to the thoughtful man they can never come amiss. We recommend the work to the careful attention of all.

A TREATISE ON HUMAN PHYSIOLOGY, DESIGNED FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By JOHN C. DALTON M. D. Fourth edition, revised and enlarged, with 274 illustrations. Philadelphia: H. C Lea. 1867.

We are under many obligations to this enterprising publisher for an improved edition of this work on physiology. This branch of medicine is so rapidly progressive, not only in itself, but also in collateral studies, which do not fail to make their impress on physiology, that every year almost demands a new edi-

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tion of a work of this character to keep pace with such progress. Thus the present edition is not marked by any very great discoveries in physiological knowledge, but a thorough revision has brought it up to the times. The reputation of Dr. Dalton as a physiologist must make his work a standard in the schools and the profession. There can be no better text-book for students. As an American work, also, it should stand pre eminent in the estimation of medical men of this country, and should be placed among the foremost in our medical schools. We advise every student of medicine to place this in his library; the practitioner, of course, will not fail to make it his book of reference.

ON LIGATION OF THE FUNIS. By A. F. A. KING, M. D., late Lecturer on Toxicology, National Medical College, Washington, D. C.

This is an essay on this all-important question, whether we should ligate the unbilical cord or not. The author has considered the subject in every light, for so universal a practice as this ligation might well produce hesitation before advancing the contrary doctrine. But only the conviction of the truth of his principles has given him the courage to make them public and urge upon the profession the testing of their validity by the light of actual experience. The conclusions at which the author has arrived, are: First, that ligation of the umbilical cord at childbirth is in all, or at least in the very great majority of cases, unnecessary; second, that it is, in many cases, injurious; third, that certainly in some, and probably in not a few, it is actually fatal to life. The arguments in support of these propositions are well grounded, and have certainly very strongly inclined us to their adoption. We shall, when occasion properly arrives, try the method of non-ligation, and watch carefully the results. The old method of dressing the umbilical cord has nothing to be urged in its favor, especially so where we find among some nurses and physicians the practice of removing the dressings from day to day to the annoyance and injury of the child. It is the author's desire to have the whole subject considered and experimented on by the profession. Viewing it as a novelty merely, it is worthy serious attention, that it may stand or fall by its own merits. We recommend the perusal of the essay to every physician, who

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will find it, as a literary production at least, well repaying time and attention.

A BIENNIAL RETROSPECT OF MEDICINE, SURGERY AND THEIR ALLIED SCIENCES. Edited by Mr. H Power, Dr Anstie, Mr Holmes, Mr. Thomas Windsor, Dr. Barnes and Dr. C. Hilton Fagge, for the New Sydenham Society. Philadelphia: Lindsay & Blakiston. 1867.

Eight extensive reports, with a complete index, which latter in itself is necessary to show the great range of topics gathered from the medical world, on the branches of Physiology, Practical Medicine, Surgery, Ophthalmic Medicine and Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence, Materia Medica and Public Health, respectively, together form a considerable volume of valuable information. It is sufficient to refer to the eminent names at the head of those papers to convey an idea of their value.

Lindsay & Blakiston have placed, with their usual enterprise, this volume before the profession. If we do not mistake, this anticipates, or else is synchronous with the issue of the same volume by the New Sydenham Society.

A HANDBOOK OF UTERINE THERAPEUTICS. By Edward John Tilt, M. D. New York: William Wood & Co. 1864.

Although several years have passed since this work was first issued from the press, we cannot but regard the opinions therein laid down as yet holding good. It is an excellent book; the therapeutics of the uterus have been much changed since manipulations are more common, but the physician's older mode of treatment will answer the purpose a while longer. We recommend a re-perusal of the work by those who have made progress; we are sure it may impose some restraint upon the too rapid career of the reformer, just as in general practice we frequently stop to re-examine old doctrines, surprised at the truths which are developed, as we regard them in the stronger light of experience. Let no one think his time lost by perusing this work once more.

IS IT I? A BOOK FOR EVERY MAN. A COMPANION TO "WHY NOT?" A BOOK FOR EVERY WOMAN. By Prof. H. R. Storer, M. D. Lee & Shepard, Boston. 1867.

After our notice of the little book, "Why Not?" a book for every woman, we should but repeat what was there said in

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speaking of the present production of Prof. Storer. It is an essay of much value to all, and coming at a time when all need it. Its clear, vigorous style goes directly to the weakest understanding, and must convey something of the writer's energy and noble purpose to him who reads. We hope the production will be widely circulated; we are sure it must have a happy influence on whoever reads it. We congratulate Dr. Storer on the success with which he is meeting, not only in reference to his publications, but also in his professional standing. Opposition has stimulated him to further exertion, and he has overridden the petty jealousies, which may annoy, though ultimately must succumb to superior force.

In the Boston *Medical and Surgical Journal* for June 20, 1867, we find a highly complimentary and truly just notice of Prof. Storer's efforts in behalf of the profession, so far as relates to his efforts to advance the study of the surgical diseases of women. That this notice was not formal merely, may be inferred from the signatures of the members of the class who were practitioners, chiefly of many years' standing. Lately, in furtherance of his own views of medical education, and in accordance with the resolutions of the Convention of Teachers at Cincinnati, he has associated with several professional gentlemen of high standing for the purpose of giving instruction in their respective departments to advanced students and to physicians who desire to fit themselves for special practice. The course will not conflict with the collegiate curriculum. These specialties in study are gradually winning their way, and will probably form the basis of reform in medical education. Men of the profession are up and doing, and their work is gradually impressing the outer walls of the old system.

THE PHYSICIAN'S HAND-BOOK FOR 1868. By W. Elmer, M.D. Townsend & Adams, Publishers. New York.

This publication has reached its eleventh year, and each year has made it more and more acceptable. We have not yet seen so convenient a form for the keeping of physicians' accounts, and the daily history of disease, as in this edition before us. It saves a great deal of time, as we hope to experience the coming

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year, and also a good deal of annoyance, to judge by the account books of some of our professional brethren. Besides, if carried in the pocket, it will fill up a good many spare moments by the valuable medical information on various subjects which it contains.

WOMAN'S RIGHTS. By Rev. JOHN TODD, D. D. Boston: Lee & Shepbard. 1867.

A very excellent essay on the follies of woman progress in woman's career. The author in a few earnest, plain words, calls upon the female to remebmer her sex, and, in a few well-chosen arguments, shows how utterly absurd it is for the woman to become a man in her occupations.

The Missouri State Medical Association.—A movement is at hand to revise the old State Medical Association—old, because a number of years have now elapsed since it held its annual meetings—not old, however, from years, yet the profession has had time in that short interval to undergo, from whatever cause, a complete revolution. We are glad to see the effort made in the premises; we hope it will succeed; we shall do all in our power to assist it, whether as individuals or through our journal; and we offer here what assistance is possible through our pages to reorganize and plan, on a sure foundation, an association which must influence to the highest degree the character of our profession and redound to its honor.

The few years that have just gone were troublous enough to prevent any unity of feeling among physicians. Even the local societies were broken up, or held uncertain meetings; but quiet is restored, as we see by our correspondence through the State, the county and city societies are again in action, and we may now hope for a unanimous feeling toward the object in view. Now is better than later, though a more genial season might have been chosen for the invitation to our country brethren; but this will be a preliminary meeting, and the next can be held at the usual time of regular meetings in April or May, prior to the meeting of the American Medical Association.

Of course, the object of this State Association is to maintain

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the standard of the medical profession, and to advance medical science by a union of all the regular members of our common body, as well in sympathy as in actual work. How to reach this object is the question in hand, and which will probably be thoroughly discussed. By association first of all, for we believe very much can be done by this regular meeting of physicians from all parts of the State; this acquaintance with each other, this interchange of opinion upon medical topics, even if it were nothing else but a social gathering, wise-acres to the contrary notwithstanding, will do much, very much, to bind us together, to protect us, if need be, from the inroads of quackery, to elevate, in fine, the whole tone of the profession. It is upon this union that we must lean in order to save ourselves from the sarcasms of our friends and the undermining of charlatanism. If the medical profession had but held together in the temper which it proclaims for itself, it need never have taken in hand seriously the pernicious doctrines in medicine which are every day springing up, they need but have been let "severely alone" to have seen them die as they were born. It is this attention as to how we comport ourselves that the association should have in view in all questions of irregularity of practice. Legislation will not rectify the false doctrines, whether by statute or by a Board of Examiners. If no other argument were used, the fact of utter failure throughout the States of legislative enactments would be sufficient to warn us from taking the like steps. Let legislation alone, and let us cure our own evils by the simple putting on of hands. Is it to be supposed that legislators know our wants, or can understand them if told—that the appointing power will always act for our interests? It may be that appointing power or legislative power is seduced by false prophets, and this may very readily be the case, as experience will show. Moreover, and above all, our government is contrary, by its own nature, to constant legislation. "We, the people," have always something to say in matters concerning everybody and everything; we choose our own doctors—good, bad or indifferent. We can not adopt European customs in reference to our profession where everything is legislated, any more than we could im-

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pose our own manners on the governments of Europe. There everything begins with the government and ends with the people; here, the contrary, the people begin—the government must yield. Let us look to ourselves and be guided by our wants as we know them, and we need never ask for legislation.

It is possible, from the great efforts that are now being made toward reform in medical education, that some radical changes will be introduced, in the course of a few years, into our American system of teaching. Whatever the result, more energy must be infused into our endeavors at rightly inculcating first principles into the student; upon each rising generation of physicians must depend a long future; upon them alone we must trust for the maintenance of the high standard which the profession ever assumes. Let us look to this point in our efforts to prevent the encroachments of charlatanism. This can never, from the very nature of things, be entirely rooted out; it is utopian to suppose that human nature can be changed from what it is now; what has been, will be; but respect ourselves, and we can gain the esteem of others. But to noise our wants and troubles abroad gains no sympathy, but on the contrary affords food for gossip. We verily believe that if these new schemes of cure were absorbed so far as they were worthy (for there is a grain of wheat in the chaff of human actions), we should destroy the hydra-head; as it is, we vainly battle against the monster by cutting off the heads without searing them.

Our space forbids us to enter further into this extended subject. Suffice it to say, let our State Association be formed; let it talk of medical subjects, and leave questions of legislation in whatever form; it is better to borrow experience than buy it, and with the numerous examples before us we can now have it at a very cheap rate.

As applicable to the above, we see a call for the homeopathists to meet in convention. Is not here our very argument illustrated with regard to legislation? Who shall decide between us and the homeopathists in the Legislature?

We have received the following note on the action of the New York Academy of Medicine and the homeopathists. It is

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interesting and contains much good sense. We insert it with pleasure:

To the Editors of the New York Evening Post:

The attitude of the Academy of Medicine toward homeopathy and every other exclusive system of medicine is very much misunderstood by the public. The regular school admits most distinctly that every remedy may be beneficial against some one or more diseases; and that it is the duty of the true physician to make himself acquainted with as many curative procedures as possible. The profession is broadly catholic, and accepts improvements from all quarters; but it is also necessarily somewhat conservative, and will not hastily abandon approved methods until it is sure that better have been found. It also imperatively demands that all so-called improvements shall be in accordance with common sense and good judgment; and while it cordially welcomes every real advance in every department of medicine and surgery, it determinedly resists all extremely revolutionary and completely subversive systems.

Thus it must reject the extreme homeopathist with his one law of treatment and his excessively minute doses. For it knows that the law of similarities is only a partial, or even only an apparent, truth; because a similar thing DIFFERS somewhat, as well as resembles a great deal; hence, a so-called homeopathic remedy acts somewhat differently from, or really allopathically to, the disease it is given to cure. In the regular school, remedies are given which act either similarly, differently or antagonistically to the action of the disease, just as experience and reason require; for this is merely giving medicines which act slightly, greatly or extremely different from the morbid action. It has no objection to the law of similarities as a partial truth, but rejects homeopathy when it claims to be the only true system of medicine. It rejects infinitessimal doses because they are not only irrational in themselves, but are rejected by the major part of the homeopathists also. The more rational of the homeopathists not only use doses which are not homeopathic, but they are also often obliged to fall back upon the remedies of the regular school in many cases of severe suffering and great danger.

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Hence, as many of the homeopathists use their medicines in an allopathic way, and use allopathic remedies besides, they must be rejected as long as they publicly claim that homeopathy is an universally true system of medicine. They are simply regarded as recreant allopathists. They get all their knowledge of anatomy, physiology, surgery, midwifery, &c., &c., from the regular school, and a large portion of their materia medica and therapeutics, and merely use a few new or old remedies in a peculiar way. Whenever they condescend to use their own remedies in a rational and professional way, and give their allopathic doses and remedies without mystery or concealment, there will be no quarrel with the Academy of Medicine. Every new remedy which they may discover, every old remedy which they may use in novel and useful ways, will be honestly and carefully tested. The regular school already use many of the so-called homeopathic remedies far more scientifically and wisely than the homeopathists themselves. There is no illiberality against the use of any medicine which is brought forward in a frank, rational and professional way. There is the largest and broadest freedom for the use of any and every remedy which has simple and rational experience in its favor. J. C. P.

New Orleans Journal of Medicine.—We see by the last number of the *Southern Journal of Medical Sciences* and the New Orleans *Medical and Surgical Journal* that they are to be united under the name of *The New Orleans Journal of Medicine*, and to be under the management of Drs. S. M Bemis and W. S. Mitchell, and, if equal in style and composition to either of the present journals, will be worthy the entire confidence of the profession. No city in this country could claim superiority to New Orleans in periodical medical publications—both have been gotten up in the best style and filled with the choicest matter—and we doubt not that with the known ability of the editors of the new journal (who have also been connected with the previous as editors and proprietors), that it will rank with the best in the country. One reason that journalism has, in a literary point of view, suc-

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ceeded so well in New Orleans, has been the interest manifested by the professors of her medical college. We see in both of the old journals able articles and lectures by various members of the faculty, which redown not only to their credit as medical men, but by their ability give some idea of their capacity as medical teachers; and surely it is but right to expect that those who set themselves up as medical authority should give some record of their ability as such.

The New Sydenham Society.—The following extract from the Laws of the Society will sufficiently explain its objects:

I. "The Society is instituted for the purpose of supplying certain acknowledged deficiencies in the existing means of diffusing medical literature, and shall be called the New Sydenham Society.

II. "The Society shall carry out its objects by a succession of publications, of which the following shall be the chief: 1. Translations of Foreign Works, Papers, and Essays of merit, to be reproduced as early as practicable after their original issue. 2. British Works, Papers, Lectures, &c., which, whilst of great value, have become from any cause difficult to be obtained, excluding those of living authors. 3. Annual Volumes, consisting of Reports in Abstract of the progress of the different branches of Medical and Surgical Science during the year. 4. Dictionaries of Medical Bibliography and Biography. Those included under Nos. 1 and 2 shall be held to have the first claim on the attention of the Society, and the carrying out of those under 3 and 4 shall be considered dependent upon the amount of funds which may be placed at its disposal." Several handsome volumes are issued every year, and members receive notice of their arrival immediately upon their receipt from London by the Secretary in Philadelphia. The subscription constituting a member is SEVEN DOLLARS AND A HALF, to be paid *in advance* on the 1st of January annually, entitling the subscriber to a copy of every work published for that year. *No books are issued to any member until his subscription for the year has been paid.* The

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best mode of sending money is by post-office order, payable to the Secretary at Philadelphia.

RICHARD J. DUNGLISON, M. D.,
Hon. Local Secretary, 1116 Girard street, Philadelphia.

Miscellaneous.—Dr. Calvin Ellis, late adjunct professor in the medical school of Howard University, has been appointed Professor of Clinical Medicine in place of Dr. H. J. Bondilih, resigned. A school of dental surgery is to be established in connection with the medicine school of Howard.——D. J. Marion Sims has had conferred upon him by the King of Italy, the order of St. Maurice and Lazarus; and by the Queen of Spain he has been named Commander, of the First Class, of the Order of Isabel la Catholique, as recogni ions of the value of his late medical works.——Mr. Velpeau has bequeathed his surgical instruments, in equal shares, to two of his former pupils, Dr. Desprès and Dr. Guyon.——The death of Dr. Worthington Hooker is announced. He was fifteen years Professor in Yale College.——Sir William Ferguson has succeeded to the post of Sergeant-Surgeon to the Queen, vacated by the death of Sir Wm. Lawrence. Mr. Paget has received the office of Sergeant-Surgeon Extraordinary, which has been revived for him. Mr. Prescott Harritt and Mr. Hilton have been appointed Surgeons Extraordinary to her Majesty. ——The death of Sir James South, F. R. S., is announced. He was born in 1785. It is stated that the number belonging to each of the three learned professions in England is about equal —35,995 medical; 35,183 clerical; 34,970 legal.

A. M. Leslie & Co.—Removal.—This enterprising firm have removed to No. 319 North Fifth street, under the Mercantile Library Hall, where they have fitted up their establishment in the most elaborate manner. Their stock of surgical and dental instruments, trusses, braces, supporters, and rubber goods is large, and comprises everything new or novel in their line. Our friends would do well to give them a call at their new stand, and examine for themselves.

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THE SAINT LOUIS
MEDICAL REPORTER,
A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, DECEMBER 15, 1867. No. 20.

HERPES OF THE VULVA.

[From the French of Dr. F. L. Legendre.]

Translated for The St. Louis Medical Reporter.

(*Continued from Page 587.*)

Diagnosis.—Herpes of the vulva, according to the period at which we observe it, presents, as we have intimated, different appearances, which correspond to as many diseases with which it might be confounded. These diseases are: 1st. Commencing vegetations, when they have a rounded form. 2d. Hypertrophy of the sebaceous follicles. 3d. Primitive non-indurated chancres. 4th. Mucous tubercles.

1. *Vegetations.*—These offer sometimes a strong resemblance to the herpes at its outbreak. In such cases, the external surface of the labia-majora, and sometimes the genito cruval folds are scattered over with small isolated or grouped projections, of the size of a grain of millet, rounded, almost globular and shining. In a rapid and superficial examination, it is almost impossible, so strong is the resemblance, not to confound this disease with herpes, at the time when this eruption is characterized by a globular elevation of the epidermis, of the size of a pin's head, and filled with a yellowish, transparent liquid. However, a closer observation discloses the fact that the small projections which depend on incipient vegetations, notwithstanding their brilliant reflection and their transparency,

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are solid, fleshy, and exude blood, when pricked, instead of the yellowish transparent serosity.

2. *Hypertrophy of the Sebaceous Follicles.*—When hypertrophy of these follicles has given rise to small rounded projections of the size of a grain of millet, of a roseate hue and transparent, it might be takem for herpes. However, these projections, instead of being an elevation of the epidermis by serum, are solid, like vegetations, but their centre presents a depression, an umbilicus, from which we can press the sebacious matters and ascertain under the microscope their histological elements.

3. *Primitive non-Indurated Chancres.*—When the vesicles of herpes have ruptured, and superficial ulcerations succeed, we may very easily confound them, and the mistake is important to avoid, with the primitive non-indurated chancre. In fact, the two diseases may give rise to ulcerations closely resembling. However, we believe that most usually it is possible to distinguish the ulcerations which follow herpes, by the following characters: 1st. By their superficiality. 2d. By the grayish appearance at the bottom. 3d. By their multiplicity, in general. 4th. By the concomitance of several vesicles, isolated or grouped. 5th. By the rapidity of their cure. 6th. By the absence of virulence.

1. *Their Superficiality.*—If some of the ulcerations which follow herpes, from want of cleanliness, or from whatever source, present a considerable depth, which depends rather upon a thickening of the edges of the ulcerations, still, for the most part, one of the characters of the ulcerations following herpes is, to be very superficial, to form rather erosions than real ulcerations, and not to involve, like the chancre, the whole or the greatest part of the thickness of the derm.

2. *The Grayish Appearance at the Bottom.*—The ulcerations which follow the rupture of the vesicles of herpes, present like the primitive chancre, at one period of its progress, a grayish surface; but while the grayish surface of these ulcerations seem formed by a kind of disorganization, or gangrene of the superficial layers of the derm membrane, exposed by the rupture of the vesicles, the grayish appearance of the chancre is made up

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of a thick, lardaceous, rough, unequal matter, intimately adherent to the ulcerated surface on which it is deposited. In some rare instances, the erosions which follow herpes are covered with a real diphtheritic exudation, which makes a still stronger resemblance to the primitive chancre; still we may avoid error by remarking that the diphtheritic exudation which is developed upon the erosions, covers the whole extent, instead of being confined to the bottom of the ulceration. Again, this pseudo-membranous layer is easily detached with the forceps, of wiped away with a dry rag, whilst the grayish matter of chancre makes a part of it, cannot be removed, and disappears only when the chancre begins to heal. Notwithstanding these distinctive characters, the diagnosis is sometimes so difficult that we must have recourse to inoculation to determine certainly the nature of the ulcerations.

3. *Their Multiplicity.*—If it be true, on the one hand, that a single group of herpes may sometimes be developed on any part of the vulva, and give rise, after the rupture of the vesicles, to a single ulceration presenting some of the characters of the primitive chancre; if, on the other hand, there may be developed on the same parts multiple chancres, it is none the less true that herpes generally shows itself by several groups of vesicles, while usually the number of chancres rarely surpasses three or four. Thus, when we see the internal and external surface of the labia-majora, their free border, covered with numerous superficial ulcerations, rounded, grayish, of the size of a small lentil, the multiplicity of the ulcerations is a strong presumption in favor of their *non-syphilitic* nature.

4. *The Presence of Several Vesicles, or Groups of Herpes Intact.*—Unless there be but one single group of herpes, in which case all the ruptured vesicles may be replaced by a grayish superficial ulceration, it is generally possible, on examining carefully the vulva, and on stretching the skin of these parts to efface the wrinkles, to discover here and there groups of vesicles of a different aspect, according to the period of their development; a character of great importance, since it opens the way

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to ascertain their mode of formation, and the nature of the surrounding ulcerations.

5. *The Rapidity of their Cure.*—It is well known at the present day that the intervention of mercury is useless to bring about the cicatrization of the simple or indurated chancre, and that even it is injurious in the phagedenic and gangrenous forms; hence the cure of ulcerations of the vulva, under the influence of simple means, can no longer be adduced as a proof of their non-specificity. If the kind of treatment cannot show the nature of the disease, the rapidity of cure is a point of much importance; in fact, if in exceptional cases, able observers have noticed the cure of the true chancre in four or five days, it is none the less true that these specific ulcers require in general, at the least, ten or twelve days for their cicatrization. Consequently, when we see those ulcerations which are so frequently found on the vulva, modified from one day to the next under the influence of an appropriate treatment and cicatrize in four or five days, we can not refrain from considering the rapidity of the cure as a diagnostic character of great value, implying the non-specificity of these ulcers.

6. *Their Non-Virulence.*—Finally, if these ulcerations, which succeed herpes of the vulva, being deeper, more gray, more slow to heal than usual, present a strong resemblance to non-indurated chancres, and if we are doubtful of their specific character, there is still a way to remove the uncertainty; it consists in inoculating the liquid furnished by the diseased surfaces; thus, where we have herpetic ulceration, the inoculation produces no result, whatever precaution we may have taken to take the fluid from the surface of the ulcerations in full activity. Although in like circumstances I have never seen inoculation successful, still the development of a pustule would be important only so far that at the end of three or four days, the rupture of the epidermis, or the removal of the scab, which succeeded the desiccation of the fluid of the pustule, would disclose an ulceration with all the characters of a chancre at its beginning. I am of the opinion that whenever we have reason sufficient to practice inoculation, before destroying the pustule which results, it should

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have acquired characters so strongly marked as to leave no doubt of its nature. In acting differently, and in hastily destroying the pustule one or two days after its appearance, we are led to consider secondary accidents as sometimes inoculable, or to take for primitive symptoms secondary accidents, whose inoculation has produced a pustule, which would have dried up of itself, if we had waited a day longer, and hence would have furnished a result without value. Briefly, the pustule which succeeds an inoculation has not in itself a specific character, for, without having recourse to a virulent poison to explain its development, it may simply result from the irritation determined by the cut, or by the liquid, more or less acrid, which we have introduced by the lancet. Hence the pustule acquires value only so far as it gives rise to a characteristic ulceration, which we should then seek to destroy.

4. *Mucous Tubercles.*—The species of circumscribed hypertrophy which is sometimes seen during and after the cicatrization of the ulcerations which follow the grouped vesicles of herpes, offers, as we have said above, the strongest resemblance to the mucous tubercles in process of cure; in process of cure, for in the cases which we have observed, the hypertrophic spots did not present on their surface, at any period of their development, that ulcerated and grayish appearance, that fœtid and sanious secretion belonging to the mucous tubercle. Hence, the absence of these last characters might be considered as a diagnostic sign sufficient to differentiate the mucous tubercles from the circumscribed hypertrophy of the skin, which in some cases follows herpes; but that this sign may have all its value, in either case, the patient should have been watched from the beginning of the affection, for in a question of cutaneous pathology, it is impossible for the best-intentioned and the most intelligent to furnish details sufficiently minute, so that we should be able to specify what have been the progress and the characters of an eruption. However, while acknowledging the impossibility of arriving at a positive diagnosis, unless we have observed all the phases of the development of the two affections, it is still true that the great frequency of mucous tubercles in the

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female, compared with the rarity of the hypertrophic spots succeeding herpes, is a strong presumption in favor of the specificity of the greatest number of the circumscribed elevations which we see on the vulva.

Prognosis.—In itself, herpes of the vulva is by no means a grave disease, and the prognosis is so favorable that the disease would hardly merit specific attention if, by the site it occupies, and its disposition to ulcerate, it did not become the source of errors very prejudical to the patient, and even to the reputation of the physician. Without considering the prognosis of herpes in an absolute manner, except so far as relates to the circumstances of its development, the prognosis of this affection consists almost exclusively in the rapidity, greater or less, of its disposition to heal Thus, when this eruption and the consequent ulcerations appear at the approach of or during the menstrual period, as a result of venereal excess, after excessive exercise, or as the result of uncleanliness, these causes being temporary, or easy to remove, herpes disappears rapidly, and hence the prognosis is favorable; it will be less so, on the other hand, when developed, for instance, under the influence of an internal disease, or from a purulent discharge from the vagina, (a disease always tedious in its cure) herpes is frequently renewed, or maintained for a long time, whether in successive eruptions, or that the ulcerations are delayed in their cure, or increase in size, bathed by the purulent matter escaping from the vagina.

Treatment.—When herpes of the vulva exists in one or two groups of vesicles, the most simple means suffice for the cure. The patient should be kept at rest; he should resist the strong inclination to rub the parts; he should make frequent ablutions with some cold aromatic infusion, unless during the menstrual period, when the lotions should be warm.

But if ulceration occur, from whatever cause, more soothing remedies should be employed, such as warm water, bran baths—taken every other day—hip-baths on the alternate days; the constant application of emollient poultices directly to the parts, renewed every five or six hours, and preceded at each new

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application by a warm lotion of some sort, to keep the parts clean. Rest, cooling drinks, a low diet, complete the general means of cure. Injections of warm water, or some aromatic infusion, if the disease arise from a vaginitis, at the same time absolute rest, and frequently renewed warm lotions during the catamenial period. Under this treatment the pain, often acute, rapidly subsides; so with the grayish appearance of the ulcers, which often disappears in a day or two, giving place to a reddish color, the ulcers healing in five or six days. If some of these ulcers do not yield to the above treatment, the application of the nitrate of silver will diminish their sensibility and assist in their cure. The same application may be made to any hypertrophic tendency of the cicatrizations.

CORRESPONDENCE.

[Published in St. Louis Medical Reporter, by request of the Pettis County Medica Society.]

LONDON, July 10, 1867.

TO THE "PETTIS COUNTY MEDICAL SOCIETY:"

MR. PRESIDENT—*Dear Sir:* According to my promise when I left home, to write to you when I arrived in Europe something that might interest our Society, I avail myself of this opportunity of sending you a short letter containing, in a concise manner, a few ideas gathered during my short stay on the Continent, and since my arrival in London.

My first visit to a hospital in Paris witnessed the fatal effects of chloroform administered as an anæsthetic. There was something interesting in this case. The necessary preliminary examinations were had to see that no heart complications existed; but the patient was no sooner brought under the influence of the drug than a fatal asphyxia supervened, and no agents could cause nature again to rally. The case was amputation of the finger from gangrene. The hand and arm was very much involved, and seemed to threaten phagedænic ulceration.

The only rational solution that I could give in this case is one

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that I have considered good and pertinent in cases of a like nature—which is this—that no case of humid gangrene, with a general exhaustion of the vital forces, will admit of the administration of chloroform. There seems to be such a depressing and poisonous effect brought to bear upon the great nervous centers, from the *materies morbi* already in the blood, that chloroform, through some chemical agency or otherwise, is, to say the least, very hazardous if not absolutely fatal. This case belonged to the clinic of M. Richard, of Hospital Beaujon.

There is another item of interest in regard to dressings, &c., of ill-conditioned ulcers, that I wish to call your attention to. I refer to the use of carbolic acid. There is no doubt of the efficiency of this drug, and its ability to perform a great deal in all cases of the above character. There is also attributed to it the power of arresting fermentation, and hence being of great service in the treatment of zymotic disorders, cholera, &c. Of this I cannot attest.

There is a remedy that is looked upon as being of great importance in the treatment of uterine cancer, and which was introduced, I believe, by Mr. Simpson, of Edinburgh—I speak of acetic acid—and Mr. Baker Brown, of the "London Surgical Home" avers that it cured two cases for him.

There is a new plan of administering chloroform that I had well nigh forgotten to mention. Only four parts of the vapor of chloroform is used to ninety-six of air, and seems to give general, if not almost entire, satisfaction.

I am, Sir, your very obedient and humble servant,

JNO. W. TRADER, M. D.

A reception supper was given, on the 18th ult., by the physicians of Baltimore to Prof. N. R. Smith on his return from Europe.

Maisonneuve treats wounds by an entire exclusion of air. Ulcers are treated by absolute repose.

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ON NIGHTMARE OF CHILDREN.

By Sydney Ringer, M. D.

Violent screaming, which can not be quieted, and which may last for a few minutes to several hours, is frequently witnessed in children.

This is generally produced by one of three causes—hunger, pain, or nightmare. These remarks treat of screaming from the last cause.

The following account gives a fair example of a case of this kind:

Charles L., 2 years old, came under my care at the out-patient department of the Children's Hospital. The child was badly nourished, and was afflicted with a frequent hacking cough, that troubled him much more at night than day. For two months he had, twice or three times each night, started from his sleep, screaming violently. Each paroxysm of screaming lasted about half an hour. Sometimes he rolled about the bed, threw his arms about, and knocked his head violently against the bed; on other occasions he sat up in the bed and screamed so violently that he became black in the face. While thus afflicted his eyes rolled, and he appeared to be quite unconscious, as he did not recognise his mother, and could not be brought to by her care and attention. His mother stated he did not appear to have his senses. He gave no signs of being in pain. He did not talk, he only screamed violently. After each paroxysm he fell asleep, but his sleep was disturbed, and his eyes still rolled, and he frequently moaned. His gums were neither red nor swollen. His appetite was good, but his bowels had been relaxed for three weeks, and his motions were green and slimy, but no worms were ever seen in them. He was fed judiciously. He wetted the bed at night. During the fortnight that preceded his application for relief at the hospital, he had suffered from two convulsive fits, when his arms worked and his face twitched. Each of these fits lasted twenty minutes.

This case may be accepted as a very fair example for the screaming of which we are now speaking.

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Such screaming may occur in children of all ages; but, while it is met with in children of ten or twelve years of age, it is of more common occurrence in those of a few months to two or three years old.

These attacks may last a very variable time, for though the paroxysm may pass away in a few minutes, it sometimes continues for half an hour to one or even two hours. During this time the screaming is violent and continuous. Sometimes the children appear to be asleep throughout the paroxysm, while other children wake from their sleep, but continue to scream with unabated violence; but even when awake they often appear to be unconscious of what occurs around them. They seem to be, as their mothers state, "out of their senses;" thus they, for the most part, can not be quieted. Others appear to awake thoroughly, and are then terribly frightened, and often tremble all over. Such children can generally be quieted in a short time by kindness and attention paid to them, but they remain for some time much agitated, and refuse to be left alone, or, if removed from their bed, they are afraid to return to it. Some children cry only a little, but they awake up frightened and trembling.

Such screaming may continue to occur for months and even years, sometimes disappearing for a time, and then, from various causes to be immediately mentioned, it returns again. It is often repeated several times each night for several months.

Such attacks are naturally a source of much annoyance and much anxiety to the parents, and thus medical men are not unfrequently consulted for this affection. The screaming may be so violent that the child becomes "black and blue" in the face, and occasionally it even terminates in a general convulsion. This, however, is unusual, and in my experience occurs only in children who suffer from convulsions without screaming and from other causes. Such paroxysms of screaming sometimes recur only with long intervals. The child may have one attack, but this may not be repeated for some weeks, or even

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some months. On the other hand, they may recur ten or twelve times a night.

This screaming differs from delirium, as it does not occur in those diseases accompanied by delirium. Moreover, there is no incoherent talking or muttering, while some children can be roused from this state and are then perfectly rational, although greatly frightened; it occurs only during sleep. The mothers often call it nightmare.

The children, the subject of this affection, are very generally pale, often ill-nourished, and out of health. The immediate cause of this screaming appears to be some disturbance of the stomach and intestines. The nature of this affection of the intestinal canal may be very various in different cases, for one child may suffer from constipation while another is troubled with diarrhœa. This disturbance is very generally dependent on food ill-suited to young children; for this irregularity of the bowels, and the screaming which accompanies it, are especially frequent in those children who have been brought up by hand, and who, consequently, suffer on the one hand from diarrhœa, on the other from constipation. Children thus reared suffer, as is well known, very generally from constipation, and pass hard, pale, lumpy motions, sometimes like marbles. These masses may consist of fæces; they are often composed of coagulated undigested milk, of a yellowish or greenish-yellow color outside, but are white and cheesy within, looking like, and, indeed, being composed of, curds of milk. (It may be here mentioned, in passing, that not uncommonly children pass by the bowel, or sometimes vomit, large masses of the same composition. These are generally two or four inches long, and about an inch in diameter. They often excite much wonder and anxiety on the part of the mother. When broken, the white curdy appearance at once declares their nature.) Children who suffer from this affection now under consideration are sometimes infested by thread worms, and also show signs of the altered condition of the mucous membrane of the stomach and intestines by itching, heat, and dryness of the inner part of the nose, with itching at the anus. This screaming is increased by anything that

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interferes with the general health of the child. Thus, it is observed to be worse when the teeth are making their way through the gums, although the irritation and pain which arise from teething appears to be incapable of themselves of exciting this screeming. It is also made worse by slight attacks of catarrh of the lungs, or eruptions on the body. By treatment this screaming can usually be at once arrested. Both general and local treatment are in most cases required, the former to improve the general health, the latter to remove the conditions immediately excitidg the screaming.

The diet should be attended to, and any irregularity in the hours at which food is given to the child, or any unsuitability in the nature of the food, must be remedied. Attention to these points will very generally arrest any diarrhœa which may be present, but constipation with hard shotty motions will generally prove more obstinate, for such motions are almost invariably passed by young children under six months old when brought up by hand, and this although they may be correctly fed, and take nothing but good cow's milk, sufficiently diluted with water. We have seen that these hard, round, lumpy motions are partly composed of coagulated undigested milk. This coagulation in mass can sometimes be stayed by the addition to the milk of alkalies, such as limewater or bicarbonate of soda. The latter is preferable for this purpose, as limewater confines the bowels, and thus bicarbonate of soda should be preferred.

If the bowels are confined, an active purgative will, in the great majority of cases, suffice to stay the screaming, and will insure to the child calm and refreshing sleep. A powder of rhubarb and soda repeated every night, or every other night, till three powders have been given, is useful. If the child be pale, and the constipation recurs and is obstinate, the following prescription will be found very advantageous—namely:—Steel wine, to which is added a few drops of tincture of rhubarb, in quantities adapted to the age of the child and to the obstinacy of the constipation. Usually six drops of tincture of rhubarb in a teaspoonful of steel wine given three times a day will open

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freely and comfortably the bowels of a child from six to nine months old.

In order to effect a permanent cure it is often necesary to give medicines to improve the general health of the child, as these children are frequently pale and badly nourished.

Thus, in children suffering from the affection we have just described, to effect a permanent cure, if the general health be bad, treatment must be directed to the restoration of the body to sound health. In these cases iron, cod-liver oil, with cold sponging prove most useful. Of the various preparations of iron, the tincture of the sesquichloride, in my experience, is decidedly the best. It has appeared to me that bromide of potassium is able to stay this screaming, but as its administration has been accompanied by the use of purgatives, or a regulated diet, it is difficult to determine how far the bromide was useful. It is, however, I feel sure, worthy of a trial in obstinate cases. Cold baths must be given with care; for while they may, if properly administered, do much good, if administered without certain precautions they will do great harm to children. If too great a shock be given to the child, depression of the system will be produced, and this may last even several days after the bath is administered, when the child may be languid and depressed, and may suffer from much chilliness with loss of appetite. Thus the amount of shock produced by the bath must be regulated to the age and strength of the child. In cold sponging of the body the shock caused is proportioned to the coldness of the water and the length of time the bath is continued; while the younger the child, or the weaker its health, the less able is it to bear up against the effect of the shock to which it is exposed. Hence with young children, and especially with those whose system is depressed, the bath should be continued only for a short time, and if the weather be cold, the water must be slightly warmed. When the child is weak, the bath should be continued at first for a few seconds only, and its duration be gradually increased as the child becomes accustomed to its use.

If the following simple plan be adopted, the child, even if very weak, can take the cold bath with advantage, and all chance of

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depression is removed. The child should be placed before a good fire, with its feet in warm water, while the cold water is freely poured over every part of the body except the head and face. The healthy reaction, with the agreeable sensations which followed the use of the bath, may be much increased by placing the child for a short time in the warm bed from which it had just previously been removed. The bath should be given immediately the child leaves its bed, and the breakfast should be taken soon after the sponging is complete.—*Medical Times and Gazette.*

PHYSICAL THERAPEUTICS.

By Benjamin W. Richardson, M.D., F.R.S.

Hitherto in these lectures I have confined myself to an exposition of the direct influence of cold on natural functions, but the facts that have been brought forward have a bearing also on some matters of therapeutic interest. I might enlarge, indeed, greatly in this direction, but not without referring to experiments which you have not seen demonstrated—a position which in these lectures I am anxious to avoid.

UNITY OF GENERAL AND LOCAL ANÆSTHESIA.

Dwelling on such demonstrations as have been before us, or as may be at hand, I would first observe that there is an intimate connection of action between cold and those agents which produce general anæsthesia. Here is a solution of brain matter. I freeze it; it becomes solid, and it ceases at once to act as a conductor of force. I dry it down, and I reduce it to the same state; I add to it alcohol, and interfering with the water constituent—abstracting that, in fact, from the solid matter—I have condensation of fluid, liberation of heat, and solidification of the mass. Now the solidified and, as it would be called in this case, coagulated mass, is in appearance like to the frozen mass, and in respect to its conducting power it is also like; in a word, the true and necessary relations of force and of matter are destroyed, and there is no conduction. When alcohol in excess is intro-

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duced into the living brain, the same changes must be induced, differing only in the matter of degree; the alcohol must seize a certain measure of water for a time, the equilibrium of force must be disturbed, and so much matter must be rendered inert, as in the case by cold. And this is really what the attendant, or rather the succeeding, phenomena testify; there is stupor of brain, and there is a paralysis of power in all the organism; which symptoms last until, by the generation of more animal force from the combustion of blood, the alcohol is raised out of the organism.

There are some bodies which interfere with the force and matter of the brain in a more subtle, but not less determinate way than alcohol. I allude to those agents which can be made to reach the brain readily through the respiration by their inhalation as vapors—chloroform, ether, amylene, and their analogues. These substances carried to the vast expanse of blood surface in the lungs, and condensing to commingle with the blood, float with it to the brain and other nervous centres, and with the liberation of force in the process of solidification of structure are directly acted upon in the brain by its force at the expense of the cerebral water, and owing to their ready expansion, with increased pressure on the cerebral substance. Thus, again their is disturbance of equilibrium of force and matter; again, a condition is induced in essence the same as that produced by cold—viz., inertia of brain matter; and again follow the symptoms which are inevitable—insensibility, paralysis, and temporary death of the sentient being. Thus, when we are using chloroform as a general therapeutical agent, or when we are using ether spray as a local therapeutical agent, we are, in fact, carrying out the same physical process, with this difference only of detail, that in the first case we are separating brain from the part, and in the second case we are cutting off the part from the brain.

ACTION OF SALINE SUBSTANCES.

The action of saline substances as medicines is well explained and greatly simplified by these studies on the influence of cold. Salines have at all times been considered cooling medicines, and

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so-called antiphlogistic remedies; but why they should cool and allay over-action has been little inquired about. What they did has been received as matter of faith; how they did their work has been left as an impossible or even useless problem. Yet when we have before us a few leading principles, a child may understand the action of salines on animal bodies. They act, in short, only by one process, that of removing from the nervous centres and the body at large so much caloric; this they take up and augment up to a given extent their own fluidity, and as they retain the same fluidity and heat of fluidity until they are excreted from the organism, so they carry off as much caloric as they have seized, and definitely reduce the temperature. You will ask me for a visible experiment bearing upon this subject, and fortunately I can give you what you ask in a manner very peculiar and striking. I have here so much water, and I have here so much of the salt called chloride of ammonia. I now place a thermometer in the water, and the instrument tells me that the water is at 96 Fahr. I now begin to pour in the salt, and down comes the thermometer; not to lose time, I will stop when the temperature is reduced to 45°, and pass you the reduced fluid. You see clearly enough that the reduction of temperature has been due to the circumstance, that the salt has taken up so much heat of fluidity in becoming itself fluid; it has fixed so much caloric.

So far all is obvious out of an animal body; let us next go to an animal. We take a frog, and we look into the eye of the animal, and we observe a perfectly bright and transparent crystalline lens. If we killed the animal and immediately opened the eyeball, we should take out this lens to find it round, of the size of a large shot, and very clear. If we experimented, however, we should soon discover that it was readily rendered opaque and dense by cold; in fact, the lens of a frog is a kind of natural thermometer. Well, then, I have here two living frogs, and I will use them, acting on the above information, to prove by visible means the identity of action between mere cold and saline substances undergoing solution.

The first frog we will treat with ether spray until it is insen-

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sible to pain; we will then direct the spray over the eyeball, and see almost in an instant what appears; the eye is densely cataractic, the lens having become entirely opaque. This is the direct action of cold. We remove the cold; we place the creature in a condition to recover, and as it regains its power, the dense lens will clear again as surely as the sun will rise in the morning; the lens will clear under the re-absorption of caloric. How often soever you may repeat this experiment, it will not fail you.

Now for the comparison. We take this second frog, and, instead of applying cold direct, we treat him in another way. Here is the solution of chloride of ammonium, of specific gravity 1150, to which degree it must be brought before it will act. I put into a syringe one fluid drachm of this solution, and with a fine perforated needle I throw the fluid, subcutaneously, into the dorsal sac of the animal. I watch the eye for a few minutes, and observe that the posterior part of the lens—the part first cooled—becomes dense; the opacity spreads, and in this brief time I hand the animal to you with dense cataract of both eyes. If you did not see the experiment, you would not know which of the two frogs was made cataractic by direct cold, and which by the indirect action of the saline solution. The comparison extends: If I place the second frog in water with a temperature a little above 50°, and under 60°, exactly in proportion as the animal regains caloric, its powers will revive, and its crystalline lenses will of a certainty once more become clear.

It would be impossible to show with more exactitude than is shown by this experiment the identity of action between simple cold and salines. In some cases of disease, where salines of themselves are too slow in their action, they might well be supplemented by the direct action of cold, and, indeed, there is no reason why cold air should not be directly inhaled, so as to cool the currents of blood which pass over the pulmonic circuit.

USE OF COLD FOR SUBDUING NERVOUS OVER-ACTION.

Extreme cold has been applied apparently with great benefit in cases where the nervous centres are over-active. In acute

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mania the ether spray douche to the head has been followed by sudden quiet and refreshing sleep. In chorea the spray has been applied along the spinal column also with immediate relief to the convulsive symptoms. In this direction there is much room for new research, as one concluding experiment will prove.

We have before us a large, powerful frog. We will insert under the skin the forty-fifth part of a grain of strychnia. As the alkaloid makes its way to the nervous centres, we see the tetanic convulsions duly pronounced. We have exalted the force of those centres. Let us next reduce the force. To do this I will suddenly freeze the cerebro-spinal tract, the result being, as you observe, entire cessation of the tetanus. Here is another frog in which the tetanic action has been held in abeyance by the cold for eight hours, but when the cold is withdrawn, straightway the tetanus returns.

At the present moment I have no comment to make on this important experimental truth. I do not know to what it may lead, and I would not suggest the hope of its leading immediately to any new point of practice; for a man is not a frog, and by the extremest cold at my command I cannot reduce the temperature of the spinal column, even of the dead human subject, one degree. But, for all that, there is a positive truth in our possession, that in an animal whose spinal cord can be reached, extreme cold, so long as it is in action, will stop tetanic convulsion of the intensest kind.

In October next, gentlemen, I hope to have the pleasure of continuing these demonstrations, and of being honored by seeing you here again.—*Medical Times and Gazette.*

A bust, or full statue, in marble, of that distinguished physician, Trousseau, is to be placed in the hall of the Faculty of Medicine.

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ON KNOCK KNEE.

A Clinical Lecture delivered at the National Orthopædic Hospital.

By Dr. HENRY DICK.

GENTLEMEN—I select this case for a lecture, because there are some interesting points in it, which are important not only in the treatment of knock-knee, but also in the treatment of other deformities—I mean the cutting of tendons, and respecting which presently I shall explain myself more fully.

Several deformities may affect the knee joint. They may affect one or both legs. Those most frequently met with are the contracted knee and knock-knee. You have seen one case of contracted knee in our wards under treatment, and at another time I shall give you more full information about it. The third form of deformity of the knee joint is the outward curvature of the leg, and this deformity, like knock-knee, is generally of rickety origin. The most unfrequent deformity of the knee is the contraction forwards. I know only two cases on record. One of Dr. T. E. Grant, of Canada, which was of a traumatic origin; the other related to my friend, Mr. W. Adams, of which the original is in the Museum of St. Thomas' Hospital. The pathological anatomy is identical in both cases, but the history is wanting in that of the museum.

In the case before us now, I show you here the casts of the deformity of both legs previous to the cure. You see the deformity was more severe in the right knee than in the left.

The history of the case is the following:

H. P., 15 years of age, a peasant boy, never before ill, came to the hospital, December 15, 1865, recommended by our esteemed consulting physician, Dr. H. G. de Mussy. There were no signs that he had rickets in his life. He stated that twelve months before entering the hospital his knees began to be painful after walking or working, and they got worse up to the time of his coming into the hospital. He was treated with two long splints, well padded, for about three months. One deformed leg got better, but in the right leg, as soon as the splint was taken off, the deformity re-appeared. The tendon of the right

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biceps femoris and also the fascia were divided on the 20th March, the splints re applied, and in three weeks the deformity had completely disappeared. He will leave the hospital completely cured, but of course wearing irons for some time to prevent relapse.

Now, gentlemen, coming to the denomination of this deformity, I do not think the term "genu valgum" a good one, and really I consider the English denomination of knock-knee is a better definition. But in all the books on deformities it is called so, and we must keep the name "genu vulgum," as we have kept the name of "pes varus" for club foot. In science we have to do as in many other things, take them as we find them, and do the best with them. If we were to change the names of diseases to make them logical, I think much confusion would ensue, and I do hope in future when a new affection or an unknown disease may be described, a logical name will be given, so that the name will at once be a correct signification.

The father of orthopædic surgery in this country, Dr. Little, tells us in his valuable book on "Deformities," that rickets are the principal cause of knock-knee, but states that debility may produce the deformity. I think Dr. Little is quite correct, and in the case before us believe debility was the cause. But I remember a case in my own practice where knock-knee had a traumatic origin in a severe burn on the outside of the knee. I had in that case not only to cut the biceps, but also to perform a plastic operation to remove the cicatrices. In the case in point, the deformity was produced not only by the shortened tendons, but also by the *skin* and *fascia*.

In dissecting a "genu valgum" in the early stage of the deformity, we generally find the surfaces of the tibia and the femur very little changed. Real changes have only taken place in the soft parts. The ligaments, fascia, and muscles are shorter on the contracted side, and lengthened on the opposite. But in old cases the articular surfaces of the tibia and femur become changed by a partial absorption of the part where the pressure is most severe in the knee-joint. The rotary movement of the knee in walking made me at one time think it was due to the

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deficiency of one part of the articular surfaces, but my researches on the rotation of the deformed spine revealed to me the law under which that rotatory movement takes place. The reason of this rotatory movement is owing to the unyielding and unelastic state of the biceps, fascia, and ligaments, forming a kind of string of a bow; and not being capable of being extended, the knee rotates with inward movement in walking.

I think in no deformity can we give a better prognosis than in knock-knee. I do not remember one case which has not been cured when proper treatment has been applied. You may see a number of people with knock-knee, walking about not cured, but you may be sure had they been properly treated, they would have been cured. Knock-knee is generally not congenital. I cannot find any congenital case recorded answering completely to knock-knee as we see it when it occurs from rickets or debility. Mr. Depaul describes a case of rickets having taken place in the intra-uterine period, and so do some German writers, but I doubt if knock-knee can take place in fœtal life, and my reason for it is because I believe knock knee is the result not only of the rickety and debilitated state of the knee, but also of certain mechanical laws, which are not incidental to fœtal life. When rickets is the cause of knock-knee, we often find a disposition to valgus in the foot, which we do not always encounter when debility is the cause of the deformity; as an illustration is the case mentioned above; in it there was no tendency to valgus. Previously in this lecture I gave you a description of the deformity, and I told you already, as you see by the casts, that the right knee was more deformed than the left. A well padded splint was applied, with the patient of course in a horizontal position.

You have no doubt heard or read something of the *cutting* and *non cutting* of tendons in the treatment of deformities. Make it always a principle in practice to try a thing (of course if there is no danger in doing so); so I tried the non-cutting method for three months. There was a little improvement in both knees, but the deformity in the right knee was still persisting. I dare say in a very considerable length of time I should have cured

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the patient. As the non-cutting method did not seem very beneficial, I decided to cut the biceps and fascia in the right leg. You see the result. Only three weeks after the operation was performed, the deformity in the right leg had completely disappeared. You see the leg upon which the operation has been performed presents a much more normal shape than the other, upon which no operation was performed. I was always of opinion that the subcutaneous cutting of tendons is a very harmless operation; of course if practiced where not indicated, and in the wrong place, it will do harm. But the same may be said of all remedies and operative proceedings. Wherever there is an idiopathic shortening of soft parts, and no cause any longer existing in the nervous centres, I think subcutaneous section is of very great advantage. In fact all our improvements in the treatment of deformities must be ascribed to it. Our forefathers tried to cure deformities by buckling, strapping and straightening, but very little improvement was made in the right direction. Before tenatomy became popular there were numbers of orthopædic institutions to be found everywhere, but the result of their treatment was not satisfactory until subcutaneous section was tried.

In conclusion, I must impress on your minds that it is not by cutting tendons and fascias you have overcome the deformity; the truth is, in cutting a part of the tissues producing deformity, you are more able to attack the other elements causing the affection with success. Tendons, fasciæ, and ligaments combined, are too strong to be overcome, but weaken some of the elements of deformity by cutting, then you are able to overcome the other difficulties. In fact it is "l'attre Pennemi en detail."—*Canada Medical Journal.*

The last words of Velpeau were: "Il faut toujours travailler, mes amis."

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PHOSPHATE OF SODA IN DIARRHŒA.

Dr. William Stephenson, Extra Physician to the Royal Hospital for Sick Children, reports in the *Edinburgh Journal* his success in using phosphate of soda in small doses in intestinal trouble. After a report of several cases, including jaundice, diarrhœa, dyspepsia, &c., he concludes:

"In the selection of cases I have now given, I trust I have shown that in this simple, inexpensive, and easily administered medicine, we have a remedy of much value. It may be given continuously to the youngest and most delicate children with perfect safety; and in so prescribing it, we are giving a salt of the greatest importance to the general economy when absorbed. It promotes a healthy secretion of bile, and of itself can aid in the assimilation of fatty matter. In regarding the cases where it is indicated, one can not but be struck by the similarity which exists between its action and that often sought by the administration of gray powder "in alternative doses." As a rule for its prescription, I am in the habit of telling my students that whenever their minds suggest the ordering of hydrargyrum c. creta as an alternative, they should try first the phosphate of soda. The advantage of the latter over the former, where it has to be continued for some time, is patent to every one. Where the purgative effect, however, is desired, the former is to be preferred. I hope, therefore, that soon the use of the phosphate will displace in many cases the frequent and often long-continued use of the dangerous remedy.

"The cases in which I now recommend it are chiefly the following:

"In infants who are being artificially reared, and who are liable to frequent derangement of the bowels; also when the phosphatic elements in the food seem deficient, or when articles of food rich in phosphates, such as oat-meal, disagree; where from the character of the motions there is a deficient or defective secretion of bile. It is thus of service in cases of chalky stools or white fluid motions. I have also found it of service in many cases of green-stools. In diarrhœa, generally, it is more

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difficult to distinguish the class of cases. In simple diarrhœa, such as we frequently meet with in the summer months, I have not found it of much service alone, although it may be of use when given in combination with other remedies. It is chiefly in that class of cases which are more properly termed duodenal dyspepsia that it is of benefit. Diarrhœa after weaning is generally of this nature, and the cases are often chronic, or of some weeks' standing, the mother generally having exhausted her own and the nearest druggist's resources before applying for advice. It is also of service in some cases where the diarrhœa is due to some general cachexia."

He also uses it with adults in some cases of constipation, and in cases of duodenal dyspepsia. He likens its action in phthisis to that of the hypophosphites of soda.

The dose for children is four to ten grains in the food, for adults, twenty to forty grains in water, and taken after meals. Too small doses fail of their action.

A NEW ANTHELMINTIC.

By Thos. E. Broaddus, M.D., St. Charles, La.

In 1861, Mr. L., a gentleman of robust frame and remarkable muscular development, became subject to frequent attacks of gastro-intestinal irritation, and I was repeatedly called upon to prescribe for him. My usual prescription was mercury, in some form or other, combined with a sedative. This treatment invariably relieved his most urgent symptoms; but he was rarely willing to admit that he felt perfectly well.

On one occasion, when he was more than usually afflicted—complaining of considerable pain in the umbilical region, with frequent ineffectual efforts at evacuation—I requested him to take fifteen grains of blue mass, to be followed, in a few hours, by an ounce of castor oil. Upon visiting him the following day, I saw, from the expression of his countenance, that something unusual had occurred, and that it had not been of an unpleasant character. With the first dejection, after taking the oil, he had

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passed more worms (lumbricoides) than I have ever known to issue from another patient, and declared himself "a new man."

Being somewhat astonished at this more than usual vermifuge effect of my remedy (especially as my diagnosis had not included the existence of worms), I inquired if he had taken anything besides what I had recommended. He assured me that he had followed my directions to the letter, and that he had even "swallowed the blue mass in lumps"—he had not been able, with all the flour he could add, to make it into pills. Upon examining his pot of "blue mass," I discovered that it was *mercurial ointment*, which fully explained the difficulty he had encountered in making the pills.

A few months after the case alluded to above, I was called to see a negro woman, about fifty years of age, belonging to Mr. P. M., of this parish. From all appearance, her disease was intermittent fever, without any complication that I could discover. As the treatment of the case had been perfectly orthodox, I was surprised to learn that its frequent repetition had not been able to carry her beyond the relapsing period; and as the buccal secretions were viscid, and the tongue presented the same *punctæ* we so often see in wormy children, I thought it would not be amiss to administer a vermifuge. Fifteen grains of the ung. hydrarg., followed by an ounce of castor oil, brought away a large number of worms; and, without any more quinine, her tertian disappeared.

With these two cases as a basis for experimentation, it is not surprising that I should have been tempted to use this remedy when, doubtless, our ordinary anthelmintics would have answered every purpose. Satisfied as I now am, that its antagonism to verminous life is as great *within* the body as upon its surface, I reserve its use for cases which rebel against common modes of treatment. The immediate object, however, of what I have written, is to doubly call attention to the following case:

Mrs. ——, wife of a wealthy planter, had, at different times, discharged several pieces of tape-worm, but had not been fortunate enough to expel the head. Having failed to obtain lasting relief, she remained for several months without treatment. In

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the autumn of 1864, as she was suffering greatly, I advised her to resort to a new remedy. The treatment was as follows: From breakfast until 8 P. M. she took absolutely nothing into the stomach—neither liquid nor solid. At this latter hour, she drank a cup of sweetened milk. An hour after the milk, she took twenty grains of ung. hydrarg., made into an emulsion. Early on the following morning she had a draught composed of an ounce of castor oil and a drachm of spirits of turpentine. A few hours after the draught, she had a copious and very bilious evacuation; and, with it, discharged some ten or twelve feet of tape-worm—the head being this time expelled. Her health has been invariably good since that event.—*New Orleans Med. and Sur. Journal.*

MENTAL LABOR AND PHYSICAL EXERTION.

It may be possible, at some future stage of scientific inquiry, to compute the comparative amount of oxidation in the brain during severe mental labor. Even now, from obvious facts, we must pronounce it to be a very considerable fraction of the entire work done in the system. The privation of the other interests during mental exertion is so apparent, so extensive, that if the exertion should happen to be long continued, a liberal atonement has to be made in order to stave off general insolvency. Mental excess counts as largely as muscular excess in the diversion of power: it would be competent to suppose either the one or the other reducing the remaining forces of the system to one-half of their proper amount. In both cases the work of restoration must be on the same simple plan of redressing the inequality by allowing more than the average flow of blood to the impoverished organs, for a length of time corresponding to the period when their nourishment has been too small. It is in this consideration that we seem to have the reasonable, I may say the arithmetical, basis of the constitutional treatment of chronic disease. We repay the debt to nature by allowing the weakened organ to be better nourished and less taxed, according to

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the degradation it has undergone by the opposite line of treatment. In a large class of diseases we have obviously a species of insolvency, to be dealt with according to the sound method of readjusting the relations of expenditure and income. And if such be the true theory, it seems to follow that medication is only an inferior adjunct. Drugs, even in the happiest application, can but guide and favor the restorative process; just as the stirring of a fire may make it burn, provided there be the needful fuel. There is thus a definite, although not numerically stateable, relation between the total of the physico-mental forces and the total of the purely physical processes. The grand aggregate of the oxidation of the system includes both; and the more the force taken up by one, the less is left to the other. Such is the statement of the correlation of mind to the other forces of nature. We do not deal with pure mind—mind in the abstract; we have no experience of an entity of that description. We deal with a compound or two-sided phenomenon—mental on one side, physical on the other; there is a definite correspondence in degree, although a difference of nature, between the two sides; and the physical side is itself in full correlation with the recognized physical forces of the world.—*Macmillan's Magazine.*

DEATH STATISTICS OF THE SEXES.

In a paper by Mr. W. L. Sargant, on the vital statistics of Birmingham and seven other large towns in England, results are arrived at different in some respects from those commonly received. Thus, whilst admitting that there are more male deaths on the whole than female, the author states that "in the first five years of life there is a large excess of male deaths; that from five to ten years of age the male excess is very small; that from ten to fifteen the male excess is decided, but at fifteen the tide turns, and until twenty the female deaths are largely in excess; that from twenty to thirty-five the male and female deaths are equal; and then after thirty-five, the male deaths are

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again in excess. Mr. Sargant adds in a note the "singular fact" obtained from Mr. Makcham, who is such high authority in vital statistics, "that among the *males* of the upper classes, from the age of sixteen to that of twenty-three, the annual rate of mortality rises rapidly from about eight to maximum of fifteen per thousand, after which it gradually diminishes." It cannot but be desirable and interesting to ascertain the cause or causes of this state of things.

THE MEDICAL REPORTER.

ST. LOUIS, DECEMBER 15, 1867.

REVIEWS.

THE PHYSIOLOGY OF MAN; DESIGNED TO REPRESENT THE EXISTING STATE OF PHYSIOLOGICAL SCIENCE, AS APPLIED TO THE FUNCTIONS OF THE HUMAN BODY. By AUSTIN FLINT, Jr., M. D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College.

Part I.—Introduction—The Blood—Circulation—Respiration.

Part II.—Alimentation—Digestion—Absorption—Lymph and Chyle. D. Appleton & Co., Publishers. New York: 1867.

The plan of this work is somewhat novel in this country, being published in volumes, each of which is a treatise by itself, on one or more subjects connected with the science. Hence we have thus far as extensive a production on physiology as can be found. The author has taken upon himself an immense labor; but with his usual enthusiasm he has advanced far enough, as witness the present volumes, to begin to look forward to the end. We can say but little in the way of a review; what has been done is thoroughly so, for nothing is put forth in the way of fact or opinion, which has not been confirmed by his own or others experiments; or where uncertainty exists, then it is acknowledged. One can not read this work without being wonderstruck at the advances made of late years in physiological science; the study now is pursued as a basis on which must rest all future improvements in pathology. Dr. Flint has confirmed much which was uncertain in physiology, and added to the already great wealth of the science; the profession is under a

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lasting obligation to him, as one of the most useful men of the present century, and no medical library is complete without it in this important department.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS. By GUNNING S. BEDFORD, A. M., M. D., Professor of Obstetrics, the Diseases of Women and Children, and Chemical Obstetrics in the University of New York &c. Illustrated. Third edition. Revised and enlarged. William Wood & Co. New York: 1867.

This is certainly the most practical and useful work on obstetrics we know; designed by the author for the benefit of the student in particular, though the practitioner can reap much of advantage as well by reference as by positive information, he has succeeded by exceeding simplicity of detail, which is above all necessary to the beginner, in making the study of obstetrics as clear as any author who has yet written on the subject. It is impossible to speak of any portion of obstetrics without finding here a thorough examination of it. It has become the text-book of the country; we need only refer to the facts of a third edition being called for, within little over a year, to appreciate the high estimate which has been placed upon it by the profession. Each edition has been thoroughly revised; to the last has been added a chapter on phlegmasia dolens. We recommend the medical student to provide himself with the work; of course the practitioner will not fail to place it upon his shelves.

CLINICAL LECTURES ON THE DISEASES OF WOMEN AND CHILDREN. By GUNNING S. BEDFORD, A. M., M. D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Obstetrics in the University of New York, &c. Eighth edition. New York. William Wood & Co.: 1867.

This work is the result of the author's experience through the agency of his Obstetric Clinic, established in 1850; it embraces naturally the wide range of Diseases of Women and Children. As the author states, "over eight thousand cases" of this nature were presented to his classes in the course of five years. The remarks made in such cases, if collected, would have made a volume double the present size; as it is, this is but an epitome. The style is colloquial, such as the teacher would use to his pupils, and illustrated at the bed-side by the case in hand. The good is unquestionable which has thus been shown in the chine; and dedicated to the alumni of the University, many of whom heard directly from the teacher the facts herein inculcated, this

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work can not fail to be of great value to them; but further than this we have a very valuable production on the diseases of women, by one of the most distinguished professors of the country. The few chapters to which we have referred for information have satisfied us of the work. We most heartily recommend it to the student and the practitioner.

Missouri State Medical Association.—This Association, pursuant to call from a committee of the St. Louis Medical Society, met and perfected a re-organization on Tuesday, 10th of December. Over one hundred physicians were in attendance. We shall give a general summary of the proceedings in our next number. The next meeting is set for the last Tuesday in May, 1868; we trust then to see a good representation from the country.

The Medical Press of this country was never more fruitful in the production of good works than for the few past years, and we are indebted to Messrs. Lindsay & Blackiston, Medical Publishers, of Philadelphia, for some very excellent ones, notwithstanding the dullness of trade generally. We learn that they are preparing to issue, early in January next, a volume of Hospital Reports, the first announced in this country, to consist of reports of cases and clinical lectures, by the medical and surgical staff of the Pennsylvania Hospital, an institution that has now been in operation more than a century, whose corner-stone was laid by that eminent man of science, Benjamin Franklin; its reputation, and that of the distinguished physicians connected with it, being so widely extended as almost to be world wide. It will form an octavo volume, with an introductory article containing many interesting reminescences of the hospital, and those connected with it, and be illustrated by both lithographs and wood cuts.

They will also publish, about the same time, an Annual of

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Therapeutics, Pharmacology, &c., by A. Bouchardats, Professor of Hygene, &c., to the Faculty of Medicine, Paris, translated from the French, and edited by M. J. De Rosset, M. D., Adjunct to the Professor of Chemistry, University of Maryland. The eminently practical character of this publication, which appears yearly in Paris, and its immense circulation throughout Europe, have induced its reproduction in this country. The original is now in its 28th year, and consists of gleanings from all the periodicals and works which have appeared during the preceding year, and may truly be said to contain the "cream of foreign medical literature."

Hoff's Malt Extract.—We have to return our thanks to Mr. Leopold Hoff, for a sample of the above excellent preparation; and from personal experience can recommend it as a most excellent tonic, useful in cases of impaired digestion, debility, dyspepsia; and where the system requires a sustaining remedy, we much prefer it to ale or the ordinary malt drinks so much in favor for table use. For further information, address L Hoff, 542 Broadway; New York City, or Mr. F. Fuchs, No. 13 South Second street, St. Louis, agent for this city.

Cholera on an Emigrant Ship at New York.—We see by the New York papers of December 6, that the cholera broke out among the passengers in the Hamburg ship Lord Brougham, on the second day out, in a very malignant form. At one time there were one hundred cases, but on reaching warm weather the disease subsided. No new cases have occurred during the last eight days. There are now about twenty cases on board, most of them of a mild form. The ship has been sent to lower quarantine, where the sick were transferred to the hospital ship Illinois.

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To Physicians.—We would call attention to the following notice of a country practice for sale, or lease, in St. Louis county, nine miles from the city. The property, consist of a new house of five rooms, with stable and out houses, and forty-two acres of land, if desired. It is a quarter of a mile from the railroad depot, twenty minutes from the city by rail, with eight trains daily. The practice is worth about $3,500 per annum, and rapidly increasing. For terms, &c., address J. T. Whipple, M D, corner Broadway and Jefferson streets, St. Louis, Mo.

VITAL STATISTICS OF ST. LOUIS.

From November 1, to December 1, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	268	Still Born	36
White Females	213	Under five years of age	220
Colored Males	28	Between five and twenty years	41
Colored Females	18	Between twenty and forty years.	134
Born in the United States	340	Between forty and sixty years	62
Born in Germany	94	Between sixty and eighty years	24
Born in Ireland	70	Bet. eighty and one hundred y'rs	5
Born in other countries	18	Total	522

DISEASES.

Accidents	5	Fever Bilious	6
Abscess	1	Fever Puerperal	3
Apoplexy	6	Fever Intermittent	12
Atropia	4	Fever Remittent	10
Asthma	2	Fever Congestive	11
Bronchitis	18	Fever Yellow	1
Burns	1	Gangrena	1
Carditis	4	Gastritis	5
Cancer	4	Hepatitis	7
Cerebritis	6	Hemorrhage	6
Cholera Morbus	27	Hydrothorax	1
Cholera Infantum	7	Hydrocephalus	5
Convulsions	83	Laryngitis	2
Congestion of Brain	14	Marasmus	86
Croup	14	Meningitis	15
Cystitis	4	Metritis	2
Diarrhœa	12	Old Age	2
Dysentery	80	Premature Birth	6
Dentition	3	Paralysis	4
Dropsy	2	Peritonitis	5
Diphtheria	6	Poisoning	1
Delirium Tremens	3	Pertussis	6
Disease of the Heart	1	Phthisis	42
Disease of Brain	3	Pneumonia	30
Eclampsia	2	Rheumatism	2
Enteritis	14	Scarlatina	4
Erysipelas	2	Scrofula	3
Epilepsy	1	Syphilis	2
Fracture	2	Trismus	8
Fever Typhoid	17	Tetanus	5

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THE SAINT LOUIS
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A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, JANUARY 1, 1868. No. 21.

HYPODERMIC MEDICATION IN CHOLERA.

By J. K. BAUDUY, M. D.

[Communicated for the St. Louis Medical Reporter.]

On September 27, 1867, S. A. was attacked with the cholera. The symptoms present were cramps, rice water discharges, and great depression, which threatened a speedy collapse. The patient was at once placed under treatment, and in due time the cramps abated, and the discharges became bilious. Vomiting and purging of bilious matters, conjoined with a typhoid condition of system, lasted for some days, and greatly reduced her strength. At this period suppression of urine occurred, rendering her liable to the dangers of uræmic poisoning. At my regular evening visit I found her in an alarming state. The irritability of the stomach was so great that she vomited everything, even the iced champagne which had heretofore been well tolerated. Diarrhœa had been a constant symptom from the beginning. She was drowsy, restless, twitching and tossing, evincing great nervous agitation; her pulse was frequent, and extremely feeble; urine had not been passed for over twenty-four hours; percussion over bladder evinced no accumulation, proving the trouble to be due to suppression, and not retention, of the secretion. I waited impatiently for some time, trusting that Dr. Boisliniere, who was in attendance upon the case as consulting physician, would soon arrive. He was, however,

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owing to the prevalence of the epidemic, unavoidably detained. Feeling the necessity of acting promptly, I was in a quandry how to relieve my patient, as medication by the stomach was impossible, and by the bowels, to say the least, very questionable, owing to their irritable condition. Feeling the necessity of exciting the secretion of the kidneys, I determined, after some reflection, to make use of the cellular tissue as the medium of absorption, all the other avenues to the circulation being closed. I ordered dry cups to be applied over the kidneys, further directing that after this process dry heat should be applied in the same locality, in hope of stimulating the "*secretory nerves*" of the organ, as was suggested originally by Brown Sequard, who relates a case of profound uræmic coma which had been abandoned as hopeless by the attending physicians, and which he succeeded in relieving by the application over the kidneys of spoons, previously dipped in boiling water, and momentarily applied to the surface, thereby arousing the renal secretion through the influence of the "*secretory nerves.*" Finally, I injected, hypodermically, into the cellular tissue of the arm an aqueous solution of ten grains of the acetate of potash. The hypodermic medications is, I believe, by Hunter and its numerous advocates, supposed to possess three times the efficacy of an equivalent dose administered by the stomach, and as the ordinary diuretic dose by the mouth is thirty grains, I selected the above-named quantity as the proper one to inject. On returning next morning I was gratified to ascertain that my patient had urinated quite copiously *one hour* after the subcutaneous administration of the remedy. All the symptoms were relieved, pulse had improved in character, and was reduced in frequency. Dr. Boisliniere suggested that an enema of one drachm of the acetate of potash in two ounces of flaxseed tea should now be tried, repeated every three hours, until the kidneys acted well. About two of these enemas were given with no result. At our evening visit we determined to rely solely on the hypodermic method, and we accordingly injected twelve grains of the aqueous solution of the acetate of potash subcutaneously in the other arm. Five hours after its administration she urinated freely;

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and as she had taken no other diuretic, and no other adjuvants were added to the treatment at this time, it was but fair to conclude after the second successful result that a *post hoc ergo propta hoc* argument was perfectly justifiable, especially when it is borne in mind that no urine had been passed for *over* twenty-nine hours, and it was only *then* passed *after*, if not in consequence of, the *first* hypodermic injection of the remedy. The patient was now ordered two drachms of the acetate of potash by enema, and urinated freely half an hour afterwards. From this time convalescence progressed slowly, yet nevertheless surely; and with the exception of an annoying and prolonged hiccough, an attack of slight facial erysipelas and pharyngitis, which separately developed themselves, she made, for one who had been so ill, a rapid recovery. As may well be supposed, I fully appreciated and weighed the danger of abscess following these injections, yet I was agreeably disappointed, as only one superficial slough, about one inch in circumference, occurred at the point of the first injection. At the point in the other arm, however, where we injected the other solution, there was no sloughing, which good result may be attributed to the fact of the fluid having been injected deeper, more into the cellular tissue and less subcutaneously, which allowed the solution to *diffuse* itself more, and relieved the tension exercised upon the skin by the more superficial injection. In such cases what is an abscess compared with the patient's life? It would have, perhaps, been wiser and safer to have *diluted* more the solution, and have injected it at different points. In conclusion, I would ask as to the expediency of using all our remedies hypodermically in a disease where absorption by the ordinary channels is at least a misnomer, if not entirely suspended? Lionel Beale's microscopical observations would seem to prove conclusively that the intestinal villi are entirely denuded of their epithelium, and whilst endosmosis in such cases is assumed to be impossible a a fatal exosmosis is rapidly occurring. Therefore, if medication, by the ordinary methods, is, to say the least, so very doubtful, and often times unsuccessful, should we not, if we are ever fortunate enough to master the therapeutics of cholera, administer all our remedies by the hypodermic method.

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VINDICATION OF AMERICAN PRIORITY—EVIDENCE AGAINST AUTHORITY.

By T. C. Hilgard, M. D.

[Communicated for the St. Louis Medical Reporter,]

It becomes my duty to protest against a defalcation towards my own priority of discovery as well as *Prior Publication: in the Proc. Am. Association Adv. Sc.* 1854 (*Washington meeting*)* where I give the history of priority of the *experiment* (*Prof. Semple's*, Philada) of subduing (*all*) "olfactory gustation of flavors" by compressing the nose, as well as my exhaustive and perfectly *new* experiments, to experimentally preclude the communication between the oral and nasal cavities by the *physiological* production of palatal arches! I took occasion there to distinguish between the *cutaneous* sensations of the tongue, as affecting the nerves of touch (lingualis—spuriously called "gustatorius" by a school—) such as heat, cold, pungency, acerbity, astringency, against another class of *fixed* lingual and palatal (*glossopharyngeal*) sensations, which I have *there* (first in *print*) emphasized as "sweet, sour, salt, bitter," and which are at any rate controlled by the glossopharyngeus *alone:* as evident from Panizza's (1834) vivisections of that nerve, repeated, it seems, by J. Muller, at a much later period, who, however, *fails* (see his hand-books of Physiology) to draw the necessary consequences, since he is *unable to distinguish* between "savors" of the tongue and "flavors" perceived in the olfactory conchae, as experimentally proved by myself. Panizza was the first to prove the real state of affairs, making the same *natural* distinction between "fixed" and "volatile" gustations I had also made, and which led me to the true connexion of facts, or the "*ætiological*" relation, as our transatlantic neighbors are so fastidious in saying. Accidentally I had, in my first publication—*corrected in Prc. Am. Asso. A. S.* 1857, *II.* 87—been deluded into Muller's delusion about the nerve concerned, whereas he seemed to claim (Budge's Vademecums) for palatal "*savors*" the "trigeminate nerve." Forgetful of the fact, as all his school-classes have been after

* "In Experimental Observations on Taste and Smell, by Dr. T. C. Hilgard," p. 248.

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him, that the *arcus tonsillaris glossopharyng.* is extant, to account for the palatal savors (not to mention experimenting with such things as "cheese," both *salt* as well as *flavored*!)

It had become my duty to distinguish between the fixed lingual gustations, viz.: those of the *glossopharyngeus, aside* of the tactile ones of the *lingualis* on the one hand, and the aromatic volatile or "*characteristic*" ones, inclusive of "*alcaline,*" on the other, as incident to the so-called "olfactory" nerves; and which are precluded, both on pinching the nose so as to prevent a passage of air from the fauces upward, by the faucal convulsions of the tongue and fauces, as well as on *inflating the cheeks,* as in the blow-pipe arrangement. I "did" the "daring deed" to intrude on "her Majesty's English" the innovation of calling such *sapid* lingual gustations "Savors," against other *truly olfactory* "Flavors" in a *new acceptation* of *ambiguous words:* (inasmuch as we are wont still to read of a "salt flavor," &c.) In an edition of Carpenter's Comparative Physiology of 1854 (the *date of my publication,*) no mention is made of these distinctions! I have chanced in a later edition of "Carpenter's Physiology," on a quite *misconstrued detail,* concerning the matter and experiment, but no credit given, as such, except *inadvertently* by *my own proposed new distinctive nomenclature of "savor" vs. "flavor" being there adopted!!!*

Up to 1849, when I studied at Heidelberg under Henle, the experiment by closing the nostrils, as by me derived from Prof. Semple, and amplified by myself, was, as such, for purposes of distinction, unknown to the physiological faculties both at Heidelberg and at Zurich, where it became my honorable duty to first *introduce and execute the thus divulged experiment* before the entire class, after the lecture, on the person of the eminent physiologist, *Prof. C. Ludwig,* and on the worthy *professor's nose itself!* (Vide Proc Am. Asso. 1854, p. 253). This was done in 1849, and I had the displeasure of seeing the information thus divulged entirely neglected by the professor's Physiological Text-books, who at that time had complained of having "got numb" *by hard squeezing,* "nervous consensus," and what not;

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and not *appreciating the plain mechanical explanation of mechanical experiment! Such is School!*

In 1852, on taking my degree at Würzburg, and communicating the *entire subject* to Prof. Virchow, then of the faculty, he mentioned that it was not entirely "new"—but admitted it had been communicated from Zurich. I took occasion to tell him that as it had happened so through my personal friends and colleagues, —also present at my disputation—my *decisive* experiments, demonstrative of the *correctness* of my previous explanation,* denied first by Prof. C. Ludwig—should be reserved for the "Disputation," so-called, on taking my degree! It was then that, to a community (rather *unaccustomed to public proceedings!*) I first explained *coram senatu*, the *art* of producing the faucal preclusions,† in preference to Prof. Bruecke's famous experiment of making a man stand on his head in water, "to fill the nose to the level of the fauces," no doubt! The result was: he couldn't *"stand it" thus!* Prof. Virchow remarked to me that if I did not *publish* my discoveries and mode of experiment, the risk was run of loosing the claim of priority, in a country where public *lecture* before an academical body is *not considered publicity!* Being hurried away to Spain at the time, I left the pamphlet or "Dissertatio: De Gustu Olfactuque Nonnulla," then and there "credited" on my diploma, *unprinted*, the probable printing cost, deposited, becoming thus a "stipend for a poor student."

In 1854, two years later, before the assembled naturalists of the "American Association" (so abbreviated) I lectured once more on the subject, and the dissertation was printed, as above, in 1854. Prof Virchow has since that time passed through his journal several rather faulty dissertations on *my promulgated* theses, and Ludwig never understood the phenomena! Now at last I read, to my surprise, that the transatlan-

* Viz.: That it *prevented the required rush of air from within the fauces, to convey those* "VOLATILE TASTES," *as* TRUE ODORS, to the upper part of the *olfactory conchae of the nose!* p. 251.

† By *cheek inflation*—as with the blow-pipe—"thus directly intercepting the inward communication" of said cavities. p. 252.

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tic slow-coach has at last arrived at my communicated truths of 1849, in—1862: where — first of any Physiological Text-book for the School — Prof. Budge, in his Hand-book on Physiology, 1862, p. 940, § 822, dryly states, *almost verbatim, what I had fully published* (in 1854), giving the entire credit to a Dr. Schirmer—*thus* far a "poor stipendiary" on "my deposits!" —who again tampers with the "well-known" experimental hearsay facts, a good deal too late, too circumstantial, too poorly executed, in Deutsche Klinik, 1859, and in "Dissertatio," 1856, *two* years after the publication in America of American experiment, divulged in 1849, by Americans!

So long as congenial oscillation is established, from this side of the Atlantic, by *our* "cable," let the European dictating professional Dictators of Science consider *this*, as the result of Motitancy *vs.* Inertia; that, if on their side of the Atlantic little "credit" be given, of late, to new and explicit information, publicly divulged and as liberally bestowed, as almost literally *wasted* for nearly a *decennium and a half*, on the latent recollections of its pragmatic intelligence: we fear but little *credit* can be earned from certain famous diagnostic (Choleratic!) discoveries, and *laws* thereof, consummated on their part, although published and sounded through the indiscriminating press. All this, by timely forewarning, and *"printed" notice served: "Videant consules ne quid res publica detrimenti capiat!"*

HOSPITAL REPORTS.

CLINIC OF PROF. E. H. GREGORY, OF ST. LOUIS MEDICAL COLLEGE, AT ST. LOUIS (SISTERS') HOSPITAL.

[Reported for the St. Louis Medical Reporter, by THOMAS FOX.]

CASE 1.—OVARIOTOMY.—Mrs. ——, aged 36 years, residence, Dubuque, Iowa, having a tumor of the left ovary, the commencement of which she dated three years previously, and distending the cavity of the abdomen to that of the full period of pregnancy. An incision was made in the median line, from the umbilicus to the os pubis. The tumor was multilocular, the largest cyst being on the left, its walls being thin and containing

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about a gallon of fluid. This was tapped and its contents evacuated, care being taken to prevent the escape of any portion of the fluid into the abdominal cavity. The smaller cysts were on the right, and varied in size from an ostrich egg to that of an English walnut. The pedicle was secured by a wire suture attached to the ecraseur of Maisonneuve, which was left remaining upon the pedicle. But few adhesions were found. Those were divided by the ecraseur, and their vessels ligated with the ordinary silk ligature. The pedicle was divided by the same instrument. The ligature came away in three days from the pedicle; those upon the adhesions in ten days. No unfavorable symptoms followed the effects of the operation. Half a grain of morphia was given before the operation and a quarter grain every three hours for ten days afterwards. No movement of the bowels occurred until the end of this period.

Case 2.—Spina Bifida.—A case of spina bifida in a child, three week old was presented before the class by Prof. Hodgen, who, according to the plan recommended by Brainard, injected into the sac a solution of iodine of the following strength: iodine, grs. j.; iodide potas., grs. ij.; aqua, 3j.

Case 3.—Amputation of Leg and Ligation of Femoral Artery.—A man entered the wards of Prof. Gregory, in the latter part of October, to be treated for a chronic ulcer of the leg of 12 years' standing, and involving nearly the entire circumference of the limb, laying bare the tendo achilles, and causing its death by cutting off its nutrition. From the extent of the ulcer, the importance of the parts involved, and the general cachexia of the patient, it was found impossible to save the limb. Amputation was performed in the upper third. All the tissues were found in a state of fatty degeneration. The patient seemed in a much better condition, until two weeks after the operation, when secondary hemorrhage occurred. The wound was laid open, but the bleeding vessel could not be found. It was supposed to come from a branch of the popliteal artery, laid open by ulceration, consequent upon pus burrowing backward beneath the popliteal fascia. The femoral artery was ligated at the point where it is crossed by the sartorius muscle.

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Dry gangrene began in the stump, and is now limited above the knee. The patient is in a more favorable condition.

CASE 4.—DISPLACEMENT OF THE THYROID AND RUPTURE OF THE CRICOID CARTILAGES.—A man was presented to the class in the wards of Prof. Gregory, a railroad hand, a car having run obliquely across his neck, producing a displacement of the right alae of the thyroid and fracture of the cricoid cartilage. There was no aphonia emphysema extended from the point of fracture laterally to the anterior borders of the trapezei muscles and downward to the clavicles. Treated by rest.

CASE 5.—TORTICOLLIS.—A girl, aged 16 years, presented herself at the clinic, having a wry neck, caused by contraction of the sterno-cleido mastodeus muscle. The clavicular portion of the muscle was divided subcutaneously, a puncture being made through the skin, and a blunt pointed tenotome introduced, dividing the muscle from within out.

CASE 6.—NEUROMA.—James S., aged 35 years, having had amputation performed through the middle third of the thigh two years and a half previously, presents himself to be operated upon for a hard, painful, subcutaneous tumor which was in the line of the great sciatic nerve, and which began to make its appearance one year ago. It was cut down upon and found to be a tumor of that nerve as large as an egg, which was removed.

TRACINGS OF THE PULSE WITH MAREY'S SPHYGMOGRAPH.

By H. A. JOHNSON, M. D., Prof. Diseases of the Circulatory and Respiratory Organs, in Chicago Medical College.

[Read to the Illinois State Medical Society, June, 1867.]

(Fig. 1.)

1st. Trace of dicrotic pulse, taken with the spygmograph from the radial artery of a male patient, æt. 35, with typhoid fever, at the end of the third week. Passive congestion of both

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lungs had just taken place. Treated with quinine in liberal doses, with camphor and morphia. Patient recovered.

(Fig. 2.)

2d. Trace from patient affected with typhoid fever. Male, aged 40; native of Nova Scotia. Taken sick in Nebraska. Intestinal complications not troublesome. Trace taken at the end of the third week. Patient treated with chloride of sodium. Recovered.

(Fig. 3.)

Trace from patient affected with typhoid fever. Male, aged 30. Bowels troublesome; lungs suddenly congested. Trace taken at the end of the third week, at the very commencement of the pulmonary complication. *Treatment.*—Emulsion of turpentine and laudanum, with quinine, camphor and strychnia. Died.

(Fig. 4.)

From a patient having typhoid fever. Male, aged 24. Came under treatment at the tenth day. Lungs badly congested; great prostration. Trace taken on the tenth day. Died on the twentieth day.

(Fig. 5.)

Pneumonia of right lung. Male, aged 20; Swede. Came under treatment on the fourth day. Trace taken at first visit. Treated with calomel, opium and ipecac., and afterwards with

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iodide of potassium, blisters, expectorants, &c. Patient rapidly recovered.

(Fig. 6.)

Pneumonia of right lung, involving nearly the whole of the lung. Male, aged 30. First trace (Fig. 6) taken on sixth day. Treated with cathartics and iodide of potass., followed with

(Fig. 7.)

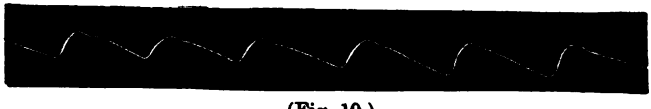
mixture of seil, ip., sanguinaria and opium. Second trace (Fig. 7) taken on the 10th day. Patient recovered.

(Fig. 8.)

Prostration from chronic gastritis. Male, aged 30. Has been sick six months. Has paroxysms of cough, attended with great distress; lungs healthy.

(Fig. 9.)

Rheumatism. Male, aged 40. Had rheumatics first about five years ago. First trace (Fig 9) taken on coming under



(Fig. 10.)

treatment. Put upon colchicum, in full doses. Second trace (Fig. 10) after six days' treatment. Left cured on the 10th day.

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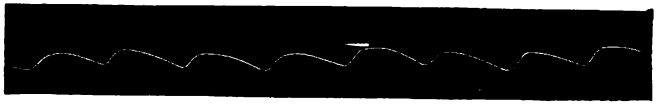
(Fig, 11.)

Rheumatism. Not severe. Male, aged 43.



(Fig. 12.)

Contraction of aortic opening. Female, aged 8 years.

(Fig. 13.)

Functional disturbance of heart's action. Male, aged 50; German. Has had trouble with heart for a long time; has also been treated for disease of the kidneys; heart sounds normal in quality, but irregular in ryhthm and intensity. The trace shows the ordinary movements of the organ. Not much inconvenience is experienced. Did not know that anything was the matter with his heart till told so by a physician. Urine loaded with the urate of ammonia; otherwise normal.—*Chicago Med. Examiner.*

PROCEEDINGS OF THE MISSOURI STATE MEDICAL ASSOCIATION.

In pursuance to the following call (see page 571 *Medical Reporter*), there was assembled, on Tuesday, December 10, 1867, a large number of the members of the Medical Profession, at the Philharmonic Hall, to take into consideration the reorganization of the Missouri State Medical Association. The Association was called to order by Dr. M. A. Pallen, Chairman of Executive Committee, and, on motion, Dr. P. A. Heitz, of Palmyra, was elected temporary Chairman, and Dr. T. F. Prewitt, of St. Louis, temporary Secretary. Dr. M. A. Pallen then proceeded to give an address of welcome to the profession and to

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state the objects of the meeting, after which the members were called on to register their names. The following physicians recorded their names as members of the Association, to wit:—P. A. Heitz, Palmyra, Marion Co.; John G. Barbour, New Madrid; Montrose A. Pallen, St. Louis; Geo. F. Dudley, St. Louis; W. B. Outten, St. Louis; F. H. Hammond, St. Louis; Henry B. Allen, St. Louis; Wm. S. Madill, St. Louis; A. Kueckelhan, St. Louis; R. S. Anderson, St. Louis; J. B. Pondrom, Jefferson City; J. F. Johnson, St. Louis; Jas. W. Clemens, St. Louis; A. Hammer, St. Louis; J. J. McDowell, St. Louis; J. F. Rumbold, St. Louis; W. H. Cooper, St. Louis; N. Guhman, St. Louis; Fred. Schard, St. Louis; Edward Montgomery, St. Louis; Fred. Frinke, St. Louis; T. J. Edwards, St. Louis; Wm. Niehaus, St. Louis; M. Martin, St. Louis; S. C. Baldwin, St. Louis; J. P. H. Gray, California; W. Lough, Kirksville; M. L. Linton, St. Louis; G. M. B. Maughs, St. Louis; Daniel Kuhn, St. Louis; N. C. Washington, St. Louis; J. H. Watters, St. Louis; T. Von Eversberg, St. Louis; J. S. B. Alleyne, St. Louis; Charles E. Briggs, St. Louis; John Grum, St. Louis; B. A. Barrett, St. Louis; E. E. Coleman, St. Louis; D. W. Romully, Laclede; A. F. Barnes, St. Louis; Geo. H. Buckbahn, St. Louis; C. C. Payne, Mosell; S. Pollak, St. Louis; E. S. Lemoine, St. Louis; E. H. Hoffman, St. Louis; Adolphus Green, St. Louis; M. M. Pallen, St. Louis; Robert Trevey, St. Louis; D. L. Bassett, Florissant; John J. Miller, Normandy; James O'Gallagher, St. Louis; G. H. Baumgarten, St. Louis; N. M. Gladfelter, St. Louis; Geo. E. McCash, St. Louis; W. N. Brennan, St. Louis; Wm. Dickenson, St. Louis; A. Jaminet, St. Louis; C. Cooper Spencer, St. Louis; Franz Hartmann, St. Louis; Chas. V. Thudurg, St. Louis; John T. Berghoff, St. Joseph; Henry C. Pococke, St. Louis; Geo. Syng Bryant, St. Louis; Drake McDowell, St. Louis; S. P. Ives, St. Louis; Alex. Marshall, St. Louis; J. M. Youngblood, St. Louis; Thos. Kennard, St. Louis; John B. McDowell, St. Louis; John L. Whipple, St. Louis; Jno. B. Johnson, St. Louis; S. H. Bottomley, St. Louis; Julian Bates, St. Louis; M. Starkeloff, Carondelet; C. F. O'Neil, St. Louis; Jas. R. Washington, St. Louis; Wm.

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Goff, Fredericktown; John H. Stomberg, St. Charles; J. P. Chesney, New Market; F. W. Wessler, New Market; P. G. Noel, Carondelet; James Fischer, St. Louis; John Blain, St. James; V. H. Auler, St. Louis; Frederick Woolf, St. Louis; Robert J. Hill, St. Louis; E. L. Atkinson, Washington; Syl. C. Griswold, New Haven; H. C. Gibson, Boonville; T. F. Prewitt, St. Louis; R. M. Jordan, St. Louis; G. A. Williams, St. Louis; Thos. Nagle, St. Louis; A. J. Stille, St. Louis; H. F. Stemhauer, Sappington; John Pitman, Kirkwood, J. G. W. Steedman, St. Louis; Homer Judd, St. Louis; D. V. Dean, St Louis; O. F. Potter, St Louis; E. de Courcillon, St. Louis; John Shore, St. Louis; J. M. Scott, St. Louis; Jas. M. Leete, St. Louis; B. F. Shumard, St. Louis.

Dr. G. F. Dudley then offered the following resolution, which was adopted:

Resolved, That this Convention now resolve itself into the State Medical Association, and that the chairman appoint a committee of five on permanent organization.

The president then announced the following as the Committee on Permanent Organization:

Drs. G. F. Dudley, J. Green, J. R. Washington, J. H. Watters, J. W. Clemens.

On motion, the Convention adjourned till 4 o'clock P. M., to await the report of the committee on Permanent Organization.

AFTERNOON SESSION.

The meeting was called to order by the temporary chairman, pursuant to adjournment

Dr. Dudley, from the Committee on Permanent Organization, read the constitution as reported by the committee previously appointed for that purpose, and the following named gentlemen for permanent officers of the convention:

President—Dr. T. A. Williams, of Booneville.

Vice-Presidents—Dr. P. A. Heitz, Palmyra; Dr. J. H. Watters, St. Louis; Dr. J. B. Johnson, St. Louis; Dr. A. Hammer, St. Louis, and Dr. John F. Barbour, New Madrid.

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Recording Secretaries—Dr. T. F. Prewett, St. Louis, and Dr. J. S. Clemens, St. Louis.

Corresponding Secretary—Dr. W. B. Outten, St. Louis.

Treasurer—Dr. Thomas Kennard, St. Louis.

On motion, the constitution, as reported by the committee, was adopted.

Also, on motion, the Convention proceeded to ballot for permanent officers, which resulted in the election of the list as reported.

Dr. Williams, on taking the chair, said:

Gentlemen of the Association: I give you my earnest thanks for the honor conferred on me by making me your president. From my total inexperience in such a position, and my very imperfect acquaintance with parliamentary rules, I greatly fear that I shall not be competent to fulfill the duties to your satisfaction. It is, therefore, with very great diffidence that I accept the trust; but as it is your wish, I will say no more than to crave your indulgence for any errors I may commit, and to say that I will do the best I can. I assure you that the reading of my name was the very first intimation I had that such an honor would be conferred upon me. If it had been otherwise, I would have endeavored to have read some remarks appropriate to the occasion.

I will now say no more than this, that the purposes for which this association has been formed meet with my most hearty approval, and I hope that your labors will result in the utmost benefit to the medical profession of the State of Missouri. Gentlemen, I suppose the Association is now ready for business.

On motion of Dr. Pallen, a committee of seven was appointed on credentials, to examine and report upon the names registered as members of the Association. The President then appointed the following as said committee: Drs. Chas. E. Briggs, Thomas Kennard, Edward Coleman, John J. McDowell, W. S. Gibson, P. E. Noel and J. P. Chesney.

The President then stated that a communication had been received from the St. Louis Medical Society, and, on motion, the communication was received and read, as follows:

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To the Medical Association of the State of Missouri:

GENTLEMEN: The undersigned, a committee appointed by the St. Louis Medical Society, respectfully beg leave to submit the following for your immediate consideration and action thereon:

Whereas, It is the paramount duty of every well organized government to enact such laws and regulations as will best secure and protect the natural rights of every member of society; and

Whereas, It is obvious to all that a great number of base imposters throughout the State, under the guise of physicians, *with* and *without* diplomas, deceive and rob the credulous sick and unfortunate, not only of money and health, but even life itself;

Therefore, We beg leave respectfully to suggest, that on the part of this Association a memorial be presented to the Legislature of the State of Missouri, requesting that body to enact a law to the following effect:

1. That *hereafter* each and every person, midwives included, before being permitted to engage in the practice of medicine in any of its branches in the State of Missouri, shall be required to give ample and satisfactory evidence of qualification before a board of medical examiners, to be appointed every four years by the Medical Association of the State of Missouri, subject to the approval of the Governor, and to be located in the city of St. Louis. The board to consist of five members, whose duty it shall be to examine carefully and rigorously every one applying for examination, and if found worthy and competent, to grant a certificate to the same.

2. That persons applying for examination may have the privilege of using either the German or French language, instead of the English, in undergoing their examination.

3. That any person violating this enactment shall not be permitted to collect any fee by law, and shall be fined ——— for each and every offense, and suffer imprisonment until such fine be paid.

Respectfully,

A. HAMMER, M. D.
M. MARTIN, M. D.
M. L. LINTON, M. D.
S. T. NEWMAN, M. D.

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On motion, the communication was made the special order of business for the evening session.

On motion, the Convention then adjourned until half-past seven o'clock in the evening.

NIGHT SESSION.

The Association met at half-past seven o'clock, and the President declared as in order for discussion the communication from the St. Louis Medical Society.

The subject was ably discussed by members, and was considered at some length by the friends and opponents of the proposed measure; and it was finally agreed to continue the subject until the next evening, the vote to be taken at 10 o'clock, P. M., when, on motion, the Association adjourned until tomorrow morning, at 11 o'clock.

SECOND DAY—WEDNESDAY, DECEMBER 11.

The Association met at 11 o'clock A. M., pursuant to adjournment.

The minutes of the previous meeting were read and adopted.

After some miscellaneous discussion, the Association, on motion of Dr. M. A. Pallen, was resolved into a Committee of the Whole on Medical Education, and Dr. W. S. Barker being called to the chair, a general discussion took place, participated in by various members; after which the committee was dissolved and the President resumed the chair, when Dr. G. F. Dudley, Chairman of the Committee on Credentials, made his report, which was received and accepted, showing one hundred and ——— members as having registered and been accepted by the committee.

The President announced the following as the committee appointed to nominate officers for the next regular meeting:

Drs. G. F. Dudley, P. A. Heitz, J. F. Barbour, J. R. Washington, —— Montgomery.

On motion, the Association adjourned until 7½ o'clock P. M.

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NIGHT SESSION.

The Association met at half-past seven o'clock, pursuant to adjournment.

Dr. John Green, of St. Louis, made a communication to the Association upon *Astigmatism*, illustrating his remarks by representations with the magic lantern. His address was of a very interesting nature, and was listened to with much pleasure and interest by the members of the Association; and at its conclusion, on motion, a vote of thanks was tendered the Doctor unanimously.

It was then moved and adopted that the next meeting of the Association be on the second Tuesday of May next.

The discussion was then resumed on the motion to adopt the resolutions proposed by the St. Louis Medical Society; the proposed measure was ably discussed by various members present, and at 10 o'clock, P. M., the vote was taken by calling the roll of members, and proposition adopted by the following vote:

Ayes—H. B. Allen, R. S. Anderson, S. C. Baldwin, E. L. Atkinson, W. N. Brennan, J. F. Berkhoff, W. S. Barker, G. H. Blickhahn, S. H. Bottomley, Dr. Birch, J. P. Chesney, E. E. Coleman, Fred. Frickle, G. F. Dudley, D. V. Dean, J. T. Douglas, J. E. Folsom, N. Guhman, N. M. Glasfelter, G. E. Gabarat, A. Groen, A. Hammer, T. H. Hammond, R. J. Hill, S. P. Ives, W. Johnston, H. Judd, T. Kennard, M. L. Linton, J. M. Leete, C. V. F. Ludwig, W. A. Madill, J. J. Miller, Drake McDowell, Alex. Marshall, W. Niehaus, James O'Gallagher, W. B. Outten, M. A. Pallen, J. B. Pongtrou, C. D. Paine, T. F. Prewitt, James T. Pirtle, T. F. Rumbold, C. C. Spencer, A. J. Steele, I. G. W. Steedman, J. Spiegelhalter, James R. Washington, J. M. Whipple, J. M. Youngblood.—Total, 52.

Noes—V. A. Barrett, J. F. Barbour, G. H. Baumgarten, J. Bates, J. Blane, J. W. Clemens, W. H. Cooper, H. A. Cooper, E. D. Cussetline, W. Dickerson, J. P. H. Grey, J. Green, S. V. Griswold, W. W. Grissom, G. Hurt, H. Jamison, H. Kueckelhan, E. S. Lemoine, W. Lough, E. Montgomery, G. M. B. Maughs, L. S. Matthews, J. J. McDowell, W. N. McPheeters, S. Pollak,

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O. F. Potter, T. Steinhauer, John Shaw, J. M. Scott, B. F. Steele, C. Sprague, R. Trevy, J. H. Watters, N. C. Washington, G. A. Williams.—Total, 38.

Dr. Kennard offered the following resolutions, which were adopted:

Resolved, That this Association, representing the entire medical profession of Missouri, insist upon all the medical schools of this State hereafter requiring a higher standing of medical and literary attainments of students before graduation.

Resolved, That we fully endorse the action of the Convention of Medical Teachers which assembled in Cincinnati last May in regard to this subject.

Resolved, That we most earnestly recommend our professional brethren throughout Missouri to organize county medical societies as auxiliaries to this, the Medical Association of the State, and to regularly send delegates to the annual State convention.

Resolved, That we encourage no person to commence the study of the profession of medicine who has not had a liberal education.

Dr. Hammer moved a committee of five be appointed to prepare and elaborate a report embracing the substance of the resolutions, to be forwarded to the Legislature, which motion was adopted.

Dr. Dudley, from the committee appointed to make nominations for the officers of the next regular meeting, reported the following names:

President—Dr. Wood, Kansas City.

Vice-Presidents—Dr. Morris, St. Louis county; Dr. B. F. Burch, Franklin county; Dr. M. A. Pallen, St. Louis; Dr. W. H. Casper, St. Louis; Dr. J. R. Washington, St. Louis.

Committee on Medical Education—Drs. Hurt, Leete, Dudley, Scott and Prewett.

Committee on Scientific Affairs—Drs. Clemens, Green, Shumard, Dean and Watters.

Committee on Publication—Drs. Hammer, Maughs and Baumgarten.

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Secretaries—Drs. Prewett and Clemons.

On motion, the report was received and unanimously adopted.

A vote of thanks to the officers of the Association, and one also to the reporters, were passed, and the Association then adjourned to meet on Tuesday, the 12th day of May, 1868.

VENTILATION.

Look at an asthmatic sitting before an open window, regardless of the cold, though it be winter, with his chest heaving laboriously, and his countenance expressive of exquisite anguish. What is the matter? Is he in pain? No. What, then, is the distress? Is it simply from want of a due supply of fresh air? The spasm in his lungs not only prevents the free admission of air from without, but the free egress of that which is within, so that the air which is in the lungs is a mixture of foul and good air.

When so many died in the famous Black Hole at Calcutta, it was because the pure air was shut out, that they could not even get as much as the asthmatic does.

Here we have palpable results, and they startle us; and yet we may be suffering from day to day, in so small a way as to be imperceptible, the evil results of deficiency of air, which may so accumulate as to impair the health, and even perhaps ultimately destroy life. It is only a few that occasionally lose their lives suddenly from want of air, but a comparatively slight but continuous deficiency in its supply is constantly destroying vast multitudes by a slow poisoning.

A good supply of fresh air is an imperative necessity. Such a supply it is easy to get when we are out of doors; but we do not get it when we are in doors unless we make special provision for it; or, in other words, unless we take measures to secure ventilation.

A proper supply of pure air in our habitations and places of public meeting *costs something*, at least in cold weather. That is

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the chief difficulty. Economy is in the way. Less fuel is required with defective than with proper ventilation.

A small room closely shut up is warmed at less expense than a large room with suitable inlets for fresh air and outlets for foul.

The necessity for freshness in ventilation may be seen if we look at the amount of fresh air required for consumption. Each person requires a gallon every minute, that is, fourteen hundred and forty gallons in twenty-four hours. It is easy to see that small and closely shut-up apartments, and large gatherings of people in public buildings, as they are ordinarily constructed, are incompatible with any such supply as this.

That you may see clearly what the necessity for ventilation is, observe what the lungs actually do with the air which they receive. Pure air is composed of three gases in certain proportions: oxygen, nitrogen and carbonic acid; this latter being in very small quantity. These proportions are altered in the lungs, so that the air which is breathed out is different from that which is breathed in. It has less oxygen and more of carbonic acid. It is less vivifying by the loss of oxygen—that is, is thus negatively injured—and it has also acquired a positively bad character by the increase of the carbonic acid. Much increase of this renders the air palpably poisonous.

If, therefore, there be great lack of ventilation, as there often is in small rooms in dwellings, or in crowded public assemblies, much injury is done to the health by the diminution of vigor from the loss of oxygen, and by the direct poisonous influence of the added carbonic acid. And if the exposure of these deleterious influences be frequent, there will inevitably be an accumulation of evil results, seen in a broken-down system, in positive disease, and at length in death.

Observe what provision is made in nature for the constant purification of the air, and how this is often more or less defeated by the arrangements of man. As oxygen is taken up in the lungs of all animals, and carbonic acid gas is sent forth from them, breathing is continually deteriorating the air. But this is remedied by a counter operation.

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Every leaf that you see is doing just the opposite of what lungs do—it takes in carbonic acid and emits oxygen—so that there is an exchange going on between leaves and lungs. In this way the due proportion of the ingredients of the air is everywhere maintained, so that if the chemist examines the air taken from various quarters of the earth, he always finds precisely the same proportions.

But this is true only of air that is free, and not of that which is shut up where there are sources of contamination. Wherever there is breathing going on, if ventilation be not properly attended to, there is a want of these natural proportions, and the deterioration is increased by fires and lights, for they, like lungs, use up oxygen, and return carbonic acid to the air.

There is still another important provision for the purification of air. The three ingredients of the air are not of the same specific gravity. The carbonic acid gas is decidedly heavier than the oxygen and nitrogen, and therefore has a tendency to lie below them, as water lies below oil. Now, if this tendency were not obviated in some way, the carbonic acid generated from lungs and fires, and various decompositions, would accumulate all over the surface of the earth, pushing up the oxygen and nitrogen above it, as water does oil, and would destroy life and put out fires everywhere.

But this tendency is obviated by another—the tendency of gases to mingle together. It is just as the heavier water does not remain below the lighter alchohol poured upon it, but mixes with it. Agitation promotes this mingling, and therefore, in ventilation, the communication of motion to the air is an important measure, and should be accomplished so far as it can be done without inconvenience.—*London Herald.*

PEPSIN IN THE VOMITING OF PREGNANCY.—A number of French physicians declare the efficacy of pepsin in the vomiting of pregnancy. It should be given in the dose of eight or ten grains before eating. Hydrochloric acid is also recommended as equally efficient—thirty or sixty drops to be taken daily, properly diluted. Strychnia, we think, is not inferior to either, the twentieth to the twelfth of a grain three times a day.—*Pacific Medical and Surgical Journal.*

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EXTRACTS FROM A PAPER ON THE TREATMENT OF INCISED WOUNDS, &c.

By James Syme, F. R. S. C., &c., &c

In cases of bruise, fracture, dislocation, and even operations of tenotomy, large quantities of blood are frequently effused more or less deeply under the integuments without causing any bad effect, and quickly disappear by means of absorption. How, then, does it happen that blood collected in the cavity of a wound should be productive of so much mischief? It can only do so, as Mr. Lister has shown, through the decomposing influence of atmospheric air, loaded with its myriads of organic atoms, and, therefore, if protected from this agency, would be no more hurtful than in the circumstances just mentioned. He has accordingly found that wounds of most formidable character may be divested of all their alarming features by means of carbolic acid, applied so as to prevent the impure air from entering.

This remarkable fact has led me to consider the expediency of resorting more frequently than heretofore to the use of "torsion" for the suppression of hemorrhage. Ever since this measure was proposed by the late M Amussat I have employed it in wounds of the cheek and lips, and also occasionally in more serious operations, to let my pupils see that it was quite effectual, but have been prevented from adopting it for general use by fearing that the absence of ligatures, which serve as conductors of the discharge, would increase the risk of blood or serum being pent up in the cavity. Feeling now happily relieved from any apprehension of evil being thus produced, I think "torsion" may in many, if not in all cases, be employed with advantage, instead of the ligature. In order to perform the process effectually, it is necessary that the artery should be seized by catch-forceps, and twisted until they become loose. It has been alleged that such a liberty with the vessel must cause it to slough, and thus disturb the adhesive action. But as this objection is altogether theoretical and contradicted by experience, it is unworthy of notice. Dr. Syme concludes:

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1st. That torsion effectually restrains the hemorrhage of ordinary-sized arteries.

2d. That its action upon them does not prevent union by the first intention.

3d. That protection from the air prevents decomposition of the blood.—*London Lancet.*

THE INOCULABILITY OF TUBERCLE.

A very interesting communication was made to the Pathological Society on Tuesday night by the President (Mr. Simon, F. R. S.,) in reference to the production of tuberculosis by inoculation. Mr. Simon said he had followed up the novel experiments of continental observers, and had succeeded, by the introduction of the tuberculous matter, in producing tuberculous deposits in several rabbits, some of whom belonging to the same litter on whom this experiment had not been performed, being entirely free from any disease of the kind. In the case of rabbits inoculated with matter obtained from other rabbits in whom tuberculosis had been produced, the development of tubercle was much more general through the lungs and the body (and also in greater amount), as though the tubercle had been acclimated, so to speak, to the system of the rabbits. In one case, that of a doe, the only apparent effect was to cause every fresh litter to be still-born. Mr. Simon observed that his experiments seemed to show that the disease was produced as well when the yellow tubercular deposit was used as when the grey granulation material was employed. Dr. Andrew Clark recounted his own researches on the subject, and suggested that it would be desirable to suspend judgment upon the question in consequence of the startling inferences that would necessarily be drawn if such experiments were accepted as true. He thought that sufficient arguments were at hand to call in question the experiments of continental observers. In the first place, the deposit in the rabbit was essentially cellular, whereas the grey granulation of tubercle was corpuscular. He had never seen the secondary concomitants in the monia and the like. The condition de-

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scribed as tuberculisation might be produced by introducing any aplastic fluid into the system; and the experiments already recorded by different observers seemed in some measure contradictory; some of them producing the artificial tuberculisation with yellow, others with grey, tuberculous matter,

The specimens of Mr. Simon, handed round, showed to all appearances tubercular matter; and they were referred to a committee for a report. The facts relative to these pathological specimens are of great interest, as the reception given to Mr. Simon's remarks clearly indicated.—*Lancet.*

Illuminating the Interior of the Living Body—"The exhibition of a cat and dog illuminated *a giorno* agreeably terminated the proceedings of the evening at one of the meetings of the International Medical Congress. These animals were presented by M. Milliot, of Kew, who has conceived the idea of a new means of pathological investigation, founded on the transparency of the splanchnic cavities. The author has been led to this invention by the stomatoscope of Professor Foussagrives, of Montpelier, which consists in introducing electric light into the interior of the mouth so as to faciliate the examination of this part. The apparatus consists in glass tubes of different sizes containing a twisted wire made of platina, and which communicate with an electric machine of Middeldorf. The tubes are introduced through the anus for the investigation of the abdominal viscera, and through the œsophagus for the investigation of the stomach. M. Milliot hopes that when this apparatus shall have attained a greater perfection, it may be possible at some future period to apply it to man, and thus arrive at a new means of diagnosticating visceral tumors and other morbid alterations of the stomach, the intestines, the bladder, etc. In the female, for instance, these tubes might be introduced into the vagina and the anus at the same time, and thus serve as a means of making out with greater certainty the different tumors of the ovaries—an important point in practice on account of the frequency of operations on those organs. The author hopes to render the whole human body transparent *intus et extra*."—*London Lancet.*

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Power of Absorption of Wounds and Abscesses.—M. Demarquay has submitted to the Academy of Medicine of Paris a series of experiments on this subject. He placed upon wounds and into accidental cavities aqueous solutions of iodide of potassium of the strength of ten per cent. After from six to thirty minutes, iodine was found in the urine, and especially in the saliva The author considers that ulcers and abscesses absorb also noxious gases both from the atmosphere and those formed by the decomposition of blood and pus. He therefore advocates the protection of wounds and abscesses from the surrounding air, dressing them with glycerin, alcohol, or disinfectants; and surrounding patients with as pure an atmosphere as possible.—*London Lancet*.

THE MEDICAL REPORTER.

ST. LOUIS, JANUARY 1, 1868.

REVIEWS.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, Instituted 1847. Vol. XVIII. Philadelphia. Printed for the Association. Collins, Printer.

The last volume of the Association comes to us in its usual excellent style of typography; though smaller so far as the amount of material is concerned, it is none the less acceptable for the choiceness of the papers—they all bear the impress of industry and talent. We hope to see the efforts of the Association successful in bringing before the profession so much that is valuable to the advancement of medical science.

The table of contents will sufficiently illustrate the character of the work. We find, after the practical address of the President, Henry F. Askew, M. D., and the reports of the various sections and committees, papers on Extra Uterine Fœtation and Gestation, by Stephen Rogers, M. D., New York; on Heart Diseases as observed in the military service from 1861 to 1865 inclusive, by M. K. Taylor, M. D.; on the Action of Belladonna in disease of the Cornea, by J. S. Hildreth, M. D., Chicago; on Use of Plaster of Paris in Surgery, by J. L. Little, M. D., New York; on Ligation with Depletion of Varicose Veins of the

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Leg, by B. Howard, M. D., New York; on Hip Joint Operations during the late civil war, by Paul F. Eve, M. D., Nashville; a Statistical Table on Lumbar Colotomy, by G. C. Blackman, M. D., Cincinnati; Epidemic Cholera, by E. Harris, M. D., New York; Prize Essays, by J. R. Black, M. D., Newark, Ohio, and M. A. Pallen, M. D., St. Louis, the latter on the Treatment of Certain Uterine Abnormities.

Every physician, in justice to himself and the Association, should possess the work. It can be obtained on application to the permanent Secretary, Dr. W. B. Atkinson, Philadelphia.

THE PRACTICE OF MEDICINE AND SURGERY APPLIED TO THE DISEASES AND ACCIDENTS INCIDENT TO WOMEN. By Wm. H. Byford, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College. Second Edition enlarged. Philadelphia: Lindsay & Blakiston. 1867.

There are so many works and so many essays produced on this subject from year to year that the physician in full practice, much less the student or junior practitioner, can hardly keep account of them. True, too much can hardly be said or thought of this important subject, and it has been solely by this laborious investigation that we have reached so far in our understanding of the diseases incident to females. The results are worthy of this labor; if we compare the works now issued with them of a dozen years since we may congratulate ourselves on having made considerable progress.

Professor Byford's work is replete with information, and, the result of the experience which has been carefully and laboriously gathered, we can rely on its value and make use of it as if it were new. The author has treated very fully of the multiplicity of uterine diseases, and some minor topics, such as nursing one month. We find, on examination of any one particular subject, all that is satisfactory. We can rely upon him as a truthful expositor of the facts, and place him in the front rank of those whose attention has been occupied in this field of medical investigation. The physician who devotes himself to this branch of medical learning will not be without the work; the student, for whom it is principally intended, will find in it all that is necessary to inform himself on a branch of medicine,

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than which none is more difficult or requires clearer thought and greater application.

LECTURES ON THE DISEASES OF WOMEN. By CHARLES WEST, M. D. Third American from the third and revised English Edition. Philadelphia: Henry C. Lea, 1867.

Another edition of this very valuable work has been called for, and we thank the enterprise of the publisher for its production. West's lectures on the diseases of infancy has always been considered a standard work; this is by no means behindhand. It bears the same impress of the high moral character and intellectual ability of the man. The same careful attention is given in the discussion of every question on this important subject, and we know of no one writer who has more fully and fairly elucidated the difficult question that at present occupy the mind of the profession. It is a most useful work for the younger practitioner, and can be referred to by the older for many suggestions of profit and information.

HUFELAND'S ART OF PROLONGING LIFE. Edited by ERASMUS WILSON, F. R. S., author of "Human Anatomy," "Diseases of the Skin," etc. Philadelphia: Lindsay & Blakiston. 1867.

The above work, written half a century ago, is produced by the industry of Mr. Wilson from an old translation in 1794 As a work for the people none can be better; to the profession it is well worth a place among the more scientific works, as embodying the views of a prominent medical philosopher in days gone by. They do not differ much from our own at this time, with all the facilities of research and progress. It is an interesting work to read as a relaxation from more severe occupation.

INHALATINN: ITS THERAPEUTICS AND PRACTICE. A treatise on the Inhalation of Gases, Vapors, Nebulized Fluids and Powders. By J. SOLIS COHEN, M. D. Illustrated. Philadelphia: Lindsay & Blakiston. 1867.

The writer was chairman of a committee appointed to prepare a report on the Therapeutics of Inhalation for the meeting of the American Medical Association in 1867. This work is the product of the author's labors in the preparation of the report. The author has elaborated the subject to the extent best known at the present day. It may be said to have embodied all that is of any value on this topic, which has attracted the attention

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of the profession so much of late. It is a book of 294 pages, and its information can be very readily gathered up. The physician should not fail to possess the work.

SYNOPSIS OF A COURSE OF LECTURES ON MATERIA MEDICA AND PHARMACY, delivered in the University of Pennsylvania; with Five Lectures on the Modus Operandi of Medicines by JOSEPH CARSON, M. D. Fourth Edition. Philadelphia: Henry C. Lea. 1867.

This work was intended for the classes in Materia Medica at the University of Pennsylvania, though it will answer admirably for the course of lectures on that subject in any college. The student can not read the extensive works during the winter term; the subject is so extensive that he can do no more than take notes from the lecturer; with this synopsis he can readily call to mind, with a little industry, what he has heard, and can afterward fill up the plan with the notes he may have taken. We recommend it heartily to the student of Materia Medica.

All the above works can be had, at reasonable rates, at Keith & Wood's Book Store, Fifth street, between Olive and Pine.

Asiatic Cholera in 1868.—We have received the following editorial from the Providence, (R. I.) *Journal*, which suggest much serious thought, and we would call not only the attention of the medical profession, but that of our city Board of Health, to the words of warning, and trust that all will take heed and be prepared in time should the indications so prevalent in other parts of the country have a reality the coming season.

"Two years since there was much excitement throughout the country, amounting almost to a panic, on account of the supposed approach of Asiatic cholera The newspapers were filled with sensation articles, giving marvellous histories of the disease; with discussions upon contagion, and non-contagion; and with a multitude of certain cures. The press and the people clamored for the immediate enforcement of sanitary measures, though there could be no possible danger from the spread of the disease for many months afterwards. In fact those best acquainted with the history and laws of the disease were unable to discover

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in the autumn of 1865 sufficient reasons for expecting a general epidemic of cholera in 1866. The result justified these doubts. There was no general epidemic in 1866, though at a few places at the West and South the disease prevailed with great severity.

At the present time there is no excitement upon the subject. Telegrams noticing the appearance of cholera in different places excite no comment; the certain cures for the disease, and the vastly more important measures for its prevention, are all forgotten. And yet there are various indications, at the present time, which, to those who have studied the progress of the disease in former years, look exceedingly ominous. There seems to be, at the present moment, far more indications of a general epidemic of cholera in 1868 than there was in the autumn of 1865 of a general epidemic in 1866. Let us notice a few of the indications:

The cholera has broken out in Havana, Cuba, and great excitement was caused thereby. Several hundred deaths have already occurred, and, at the last date, the disease continued and seemed to be on the increase.

The cholera recently appeared on board a vessel at the Philadelphia Navy Yard, and caused thirty or forty deaths in a few days.

The cholera has recently broken out in one of the country parishes of Louisiana, and has caused a large mortality, which still continues.

The weekly mortality reports of New Orleans, for the last three months, have shown more or less deaths from cholera, and the weekly number is now fast increasing. During the week ending November 10th there were 15 deaths from Asiatic cholera; during the week ending November 17th, there were 56 deaths, or one-fourth of the whole number from all causes; during the week ending November 24th, there were 89 deaths from cholera, or more than one-third of all the deaths.

One or two vessels have arrived at Quebec from Europe with cases and deaths from cholera on the passage.

Several vessels with cholera have arrived at New York, and

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the disease has existed for some time at the Quarantine of that city.

Sporadic cases of the disease have been seen in nearly all our cities the present season.

Such are a few of the facts which have fallen under our notice within the last few weeks. What do they teach? As we understand them, they teach that the primary or epidemic cause of cholera—that cause which, having its origin in India, travels westward—exists and is present at this moment over a wide extent of the surface of the earth. It exists in some portions of Europe; on the Atlantic ocean; and on this continent from New England to the Mississippi river, and to the West Indies, as well as in Central and South America. It is ready to produce its specific effects whenever and wherever it finds the necessary conditions of temperature and impure air.

In this portion of the country its effects are held in check by the cold, and will be during the winter. But in the West Indies and in New Orleans the disease will probably increase to a considerable extent; and on the approach of warm weather it will extend and increase in the northern cities. In 1853, the year preceding the last general epidemic of cholera in this country, there were 594 deaths from cholera in New Orleans, of which 332 were in December. In the same year there was a severe epidemic of yellow fever in that city, causing 7,849 deaths.

During the present year, from the 1st of August to the 24th of November, there have been 251 deaths from cholera, and 3,042 from yellow fever in New Orleans.

Such seem to be briefly the indications for the future, in relation to this subject. It should not be forgotten that there is great liability to mistake in everything concerning the future. But whether we read the indications correctly or not, we may be assured that the disease will not come without warning. If it is to be here next year, the indications of its approach will continue through the winter, and will increase with the approach of warm weather. There will be abundant time for preparation, and the city or the persons who are prepared for its coming have little cause for apprehension in relation to it."

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The Guardian.—It is with pleasure that we can announce that we shall commute subscription lists with this most excellent Catholic weekly. The *Guardian* commences a new volume January 4, 1868, and judging from the able manner in which it has been conducted in the past, we can anticipate favorably for the future. No Catholic family in the West should be without it; not only is the general news of the Church fully given, but in addition, a large amount of valuable literary matter is set before its readers. We trust its success may equal its excellence. We can offer the *Guardian* and the *Medical Reporter* one year for $5 00.

Long Island College Hospital.—We would call the attention of students to the announcement of this institution for a summer course, commencing March 1. The faculty comprise some of the most eminent medical men of the East, and their facility for teaching is excelled by no institution in the country, and their connection with a large hospital furnishes material for ample clinical instruction, given at the bed-side of the patient, an advantage all important to the student.

Dr. O. F. Potter has been elected Professor of Materia Medica in the St. Louis College of Pharmacy, in the place of Dr. J. S. B. Alleyne, resigned.

Applications for Carbuncles after Incisions and Indolent Ulcers. A solution of permanganate of potash (℥ss.-℥j.) is strongly advised as a dressing after the incision of carbuncles, and as applications to ulcers Another writer prefers the following application in indolent ulcers, where the tissues are dark and indurated: *R.*—Plumbi subacet., 7 parts; pulv. opii, 1 part; hydrarg. submur., 2 parts. He claims that it relieves pain, induces a healthy appearance, etc.—*Ex.*

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THE SAINT LOUIS
MEDICAL REPORTER,
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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, JANUARY 15, 1868. No. 22.

ST. LOUIS ACADEMY OF SCIENCE—ADDRESS OF THE PRESIDENT, DR. GEORGE ENGELMANN.

This, the Twelfth Anniversary of our Academy still finds us in this Hall, where we have met since eleven years through the liberality of one of our members, Dr. Pope, now in Europe, a liberality now nobly continued by his successor, Dr. Hodgen.

The familiar faces around me, many of them the founders of this institution, and those of our friends which in later years have become associated with us, give encouraging proof of ever active zeal and of abiding faith in our future. Notwithstanding the manifold obstacles found in the way of the unpaying, though never unrequited, pursuit of science, the private business and duties of every one of us, the difficulties of the times, and let me boldly state it, the cool apathy of the great public, and, connected with this, the difficulty of our financial position: notwithstanding all these drawbacks and impediments you have nobly built up and sustained this Academy, and made it what it is to-day, one of the scientific institutions of our city, and I may proudly add, of the country.

We have active and zealous members; we have a most valuable library; we have collections important and instructive, and in some respects unique, but we have not *funds* to make all these advantages, these fundamental conditions of a scientific institution, fully available. Our members do not only pay their

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contributions in brains, they pay them also in money, and they, many of them, have besides taxed themselves considerably for the better prosecution of our objects. But to fully unfold our scientific treasures, to make them properly available and useful, more funds, more than the limited number of our members are able to contribute among themselves, are necessary.

Our regular income amounts to about $400; our absolutely necessary expenses, exclusive of rent, which we happily do not have to pay, can be defrayed by $200; but with the meagre balance of $200 we can not bind our books, not to say any thing of buying necessary works; we can not furnish cases so as to exhibit our collections and make them instructive and useful to the public; we can not salary a curator, who would have to devote his whole time to our museum; we can not publish our transactions in regular annual numbers and properly illustrate them. It will, therefore, become an important duty for you to devise means to improve our financial condition.

The number of our active paying members is given to me by the Treasurer, as sixty-eight, three of whom have joined us during the past year; most of them regularly pay up their contributions; the few who have been remiss the Treasurer is convinced will not be found wanting.

Our corresponding members number 142; four have been elected during the last year, and two were taken away by death.

We correspond and exchange with seventy-four societies in the United States and Canada, and our foreign exchange list exhibits 172 names of Societies and Academies in Europe and other parts of the world, two of which have been added last year.

Though we have not been able to send them an equivalent since May, 1866, they have, with praise worthy liberality, communicated to us during the year over 800 hundred volumes and pamphlets through the efficient and gratuitous assistance of the Smithsonian Institution.

The following members and friends of the Academy have donated about thirty volumes, pamphlets or maps to us: Dr. Baumgarten, Dr. Boisliniere, Prof. Curtman, Senator Drake,

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Prof. Marcou, Col. Merrill, Dr. Potter, Dr. Shumard, Prof. Swallow, Dr. Ward, and Dr White.

Thus our library possesses now 1,798 volumes in folio, quarto and octavo; 968 pamphlets and twenty-two maps and charts, together 2,788 numbers, kept in admirable order and accessibility by our librarian, the largest and most valuable Scientific library in the West, which, together with the private libraries of some of our members, among which I mention the geological and paleontological library of Dr. Shumard, and the botanical library of Mr. Shaw, and my own, furnish a most important aid to study in almost all branches of natural sciences. A catalogue comprising—with our own library—the scientific works contained in the different public and the attainable private libraries in St. Louis, would furnish important aid to the student in our city.

As suggested in my last annual report, and through the exertions of our official librarian, $163 45 have been collected from members and friends as a fund for binding, for which amount 168 volumes, some of them large and costly ones, have been bound, and are thus preserved from gradual destruction. It is recommended that the exertions of those friendly to our cause be continued in this important undertaking.

Our museum has been enriched during the past year through contributions in the different branches of national sciences, from Dr. Bernays, Mr. Fendler, President Perry, Dr. Potter, Dr. Reuss, Mr. Smith, Dr. Shumard, and the President.

The following papers were read in the meetings of the Academy:

E. Harrison, on the Age and Formation of the Porphyry Hills of Missouri.

Judge N. Holmes, on the Dias of Nebraska; on the Loess Formation of Illinois and Missouri; on Pre-historic Man.

Dr. Maughs, on Free Will and Force.

Dr. C. C. Parry, on the Timber Vegetations of the Rocky Mountains.

Dr. G. G. Shumard, on the Geology of New Mexico and Texas, with plates: with additions by Dr. B. F. Shumard.

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Prof. Swallow, on the Oil Springs of Missouri.

Dr. A. Wislizenus, on Atmospheric Electricity; on Indian Graves below the Merrimac.

Dr. G. Engelmann, Meteorology of 1866; Stage of the River in 1866; Notes on Dr. Parry's Hypsometrical Observations in Western Kansas and New Mexico; on the Plants of the Genus Lemna and Wolffia in the United States; on the Pollen of Coniferae; on the species of the Genus Vitis in the United States.

A great many verbal communications on different important scientific or practical objects were made in the meetings of the Academy, and furnished the subjects of discussions.

The last number of our Transactions was issued in May, 1866. It was found financially, impossible, to publish another number during the past year; but it is expected that our business matters can be so arranged that the accumulated material, or at least a part of it, can in the coming spring be given to the scientific public in a third number, which would complete the second volume of our Transactions. Our active members expect, our correspondents demand such action. We owe to the former the gratification of seeing the results of their scientific researches published, and to the latter we are in duty bound to communicate at least an indication of the existence of active scientific life in our Academy in return for the numerous favors we are constantly receiving from them.

Permit me to close this address with a few personal remarks. On the point of going to Europe for a year or more let me take a friendly farewell from you all who have made for me the position of your President—which you have, for the past five years, kindly and indulgently trusted me with—one of pleasure and of pride, and I hope, of usefulness. In Europe I shall ever remember our Academy with the fondest feelings, and shall do what may be in my power to promote its interests there, while you, I know, will zealously and faithfully continue here to make it ever more worthy of its great purposes. Farewell!

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ULCERS OF THE MOUTH.

A paper read before the St. Louis Dental Society, by HENRY S. CHASE, D. D. S.

[Communicated for the St. Louis Medical Reporter.]

The ulcers found in the mouth are various in their appearance and pathology, and still more various in their origin. Ulcers of the mouth or any other part of the body are seldom idiopathic, but *rather* symptomatic. That is, they are rarely local in their origin, but are, on the other hand, only symptoms of some general dyscrasia, or of some local disease in another part of the body.

Young practitioners of Surgery are too apt to limit their view to the object before them, instead of looking for the forces which produced and sustain that object. The true medical philosopher must embrace in his investigations all those elements which act as *causes* for the production of those diseased conditions which he is called upon to relieve and cure.

If then the cause of an ulcer or ulcers in the mouth is not localized in the mouth itself, we must push our inquiries and investigations in that direction which will reveal it. To this end we must not only form our judgment from present symptoms, but we must, by inquiries from the patient, elicit the information we desire. And right here we see that the *medically* educated dental practitioner has a vast advantage over one who has not acquired such knowledge. The latter is groping in the dark among such inquiries, while the former enjoys the delightful sunlight of scientific knowledge, and focalises this light whenever and wherever he pleases, for the gratification of his own scientific tastes and for the good of the world around.

If the dentist is not often called upon to treat a great variety of ulcers of the mouth, it is for two very good reasons, namely: first, the *patient*, thinking him ignorant of medical knowledge, does not apply to him for relief; secondly, most of the ulcers of the mouth are concomitant with some other disease, which is being treated by the general practitioner.

Notwithstanding these facts let us study the subject, and make ourselves somewhat familiar with it, for our responsi-

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bilities are not in the least lessened by the ignorance of the public, or by that of others in our profession.

WHAT IS AN ULCER? It is a disorganized portion of either the external or internal skin, involving more or less of the loose cellular tissue beneath it; having also a circumscribed size and shape, dependent on its pathological character.

We have ulcers in the mouth resulting from syphilis, mercurial poisoning, stomatitis, typhoid fever, typhus fever, intermittent fever, scarlet fever, scrofula, bilious fever, dyspepsia, etc., etc.; also, the nursing sore mouth of mothers or nurses.

In addition to mercurial poisoning, there is also that produced by arsenic, nit. acid, mur. acid, sulph. acid, and other drugs. In scorbutic diseases there are also ulcers of the mouth. Now the treatment of these ulcers must accord with that of the disease to which it is correlated. The treatment of an ulcer of the mouth resulting from syphilis, must be the same as that of syphilis itself; and so too in regard to every affection which I have named. Therefore I will leave the study of most of these ulcers for the time when the original diseases themselves shall be considered, and for the present only speak of that more common condition of the mouth which we are called upon much oftener to treat.

STOMATITIS MATERNA.

This is a disease peculiar to women during the periods of gestation and lactation. It is a constitutional disease, having its origin nearly always in mal-nutrition. There is a greater call on the stomach for the ingestion of nutritious food than in ordinary conditions; for the blood must now furnish to the various tissues of the new being those elements of which it is to be composed, and the food itself must contain those elements in abundance or otherwise, the mother must furnish them at the expense of her own tissues. In the latter case there is *starvation* to a certain degree, and a similar state of the body ensues to that which is found in ship scurvy. Starvation takes place when any *one* of the important elements of the body is denied, as surely as though all of them are refused. In the disease of which I am speaking it is the phosphate of lime which the new

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being so loudly calls for, as it must be had, not only to form the bones and teeth, but also every other tissue and organ in the body. Flour eaters, or at least those who live principally on food made from the fine flour of wheat, are particularly subject to this complaint; for the very good reason that there is scarcely any of the phosphate of lime in fine flour, it being nearly all left in the bran and coarse portions which are sold for the feeding of cattle!

The first symptoms are a feeling of weariness, not only of the muscles, but of the brain; the latter becomes dull, wanting in activity, and desponding; there is a loss of weight in all the tissues; the blood becomes anaemic, or there is leukemia; the tongue is light colored, and the mucous membrane of the lips and mouth is pale and pasty; the teeth leave indentations in the sides of the tongue; the latter often becomes covered with pale, small ulcers, which sometimes coalesce so as to become large patches, and the same occurs also on the gums and cheeks. This pathological condition may be seen far down the throat, and doubtless does obtain in the stomach. There is a loss of appetite; there may be either constipation or diarrhea—the latter is the more common; there is sometimes severe, nervous headache—but oftener a dull and oppressive pain; accidental wounds heal with difficulty; pus cells are proliferated at the expense of the tissues; the breath is often sour; eructations from the stomach the same; the saliva has an acid reaction, and the teeth have an obstinate tendency to decay.

In the severest cases catarrhal symptoms come on, and there is a discharge from the bronchi of the lungs; and as exhaustion proceeds, the patient finally succumbs to literal starvation.

If a child is nursed by the mother it is not independent of the pathological influences affecting the latter; if it does not have apthæ itself it will be very likely to suffer from cholera infantum in the summer. In very many cases it ceases growing and becomes affected with rachitis. If it should live to erupt teeth they will be found to be very imperfectly calcified.

This is a terrible disease, and the more so because so insidi-

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ous. The mouth trouble or stomatitis is only a symptom of the real disease.

It may be said that I have *overdrawn* the picture; I have only told the truth. But *every* case of stomatitis materna is not the result of impoverished blood, but may be the result of temporary indigestion; or of an irritation of the stomach produced by some article of food disagreeing with that organ, or else the effect of some medicinal substance taken purposely or by accident.

Now if it is true that this is a constitutional disease we must see that *local* remedies will fail. They may, and often do, relieve the mouth symptoms, and under their influence the ulcers may be temporarily cured, but they should be used in connection with those general remedies which will act on the whole system. It will be seen from *my* point of view that hygienic measures must be made very prominent in the treatment.

There should be a *nourishing diet* immediately prescribed, consisting of plain and simply cooked food which has not been robbed of any of its elements of nutrition. At the risk of being tedious I would name unbolted wheat meal, lean beef and mutton, garden roots, fruits, etc.; also, light native wines and lager beer. I would prohibit fine flour, pork, salted meats, smoked fish, corn starch, pastry and confections, excepting simple fruit jellies, unspiced. There should be moderate exercise, fresh air, sunlight in abundance, daily tepid baths, and any other common sense hygienic measures that may suggest themselves.

MEDICINAL TREATMENT may consist in the exhibition of small doses of mercury, quinine, rhubarb, nitric, muriatic, and sulphuric acids, or of citric acid. Arsenic also in small doses is very beneficial. Only *one* medicine at a time should be given, and it should be continued at least a week without change, if we would observe its effects. I think the acids will be found most beneficial where there have been mal-nutrition and starvation; mercury, quinine, and rhubarb, most useful in recent cases of gastric irritation; and arsenic in cases of great debility and prostration, especially when accompanied by catarrh.

ANALYTICAL TABLE,

For Detecting the Nature of a Sediment in the Urine without the aid of the Microscope.

By C. SORBE, Pharmaceutist.

In a great number of cases the sediments of the urine may furnish means for the diagnosis of certain diseases, even when an analysis of the urine itself will give only negative results. From the difficulties which occur in solving this problem of analysis, we have endeavored to arrange in the simplest manner the characters at once the most prominent and the most decisive of the nature of these sedimentary deposits. The table does

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not supply the place of an exact analysis; it does not dispense with the use of the microscope, nor with an examination more careful and by the ordinary means, yet its use may be serviceable to the practitioner in limiting the field of observation, and in excluding from consideration certain substances of which the incompatibility, or the nature of the urine itself would exclude the presence.

A...The sediment is dissolved by heat..... *Urates.*

B..The sediment is not dissolved by heat.

- I..Pulverulent grains are seen.....
  - Yellowish red floating on the surface, or precipitated to the bottom of the vessel, adhering to its walls and giving the reactions of the murexid of Liebig, purpurate of ammonia of Prout — *Uric Acid.*
  - Suspended in mucus or mixed with other sediments, in the form of brilliant and reflecting points.... — *Tribasic phosphate of soda.*
- II. The sediment is made up of opaque pulverulent masses, which in the space of 12 or 24 hours is precipitated and separated in a more or less decided manner.....
  - *a.* The sediment is whitish
    - (1) No change with caustic potash, washed with distilled water, it is dissolved by the addition of a few drops of acetic acid...
      - *a* Without the evolution of gas.... — *Earthy phosphates (normal).*
      - *b* With a slight evolution of gas.... — *Phosphate of lime.*
    - (2) By caustic potash the reaction proper to pus, the urine containing albumen..... — *Pus.*
  - *b* The sediment possesses a color varying from a reddish brown to a deep brown. The urine contains hematine and albumen... — *Blood mixed with epithelium. pus? fibrin? mucus?*
- III..The sediment forms a compact gelatinous layer, sometimes enclosing the whole mass of liquid, when the urine is alkaline and contains albumen, — *Pus.*
- IV..The sediment is cloudy, precipitating with difficulty, and not separating in a very decided manner..... — *Urethral mucus (rarely sperm).*
- V...The sediment forms whitish filaments floating upon the liquid..... — *The matter of blennorrhagic discharges.*
- VI..Viscous masses of a greyish brown appearing in the form of small collections in urine, containing blood..... — *Coagulated Fibrine.*

—*L'Evénement Medical.*

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ON EPISTAXIS.

By Sir Henry Marsh, M. D., Bart., Physician in Ordinary to the Queen in Ireland.

Close observation of the natural process by which this exudation is effected, affords much useful instruction, and teaches us what the true nature is, of many of those internal and unseen hemorrhages, which formerly, and still are popularly, referred to the rupture of the trunk of a blood-vessel. This, doubtless, is the occasional, but comparatively rare, cause of a fatal hemorrhage. The most frequent cause of hemorrhages, often fatally profuse is—as, may be observed in epistaxis, capillary exudation—blood extravasated, not from an arterial or venous trunk, but from myriads of turgid capillary and exhaling vessels.

A remarkable case, elucidating this truth, occurred at Stevens' Hospital. A young man, laboring under hemoptysis, was admitted a few hours before my morning visit. Having spoken to, examined and prescribed for him, I passed on. Whilst talking to the patient who lay in the next bed, I heard a gurgling sound and turned round: the man to whom I had but a moment before been speaking was dead—was suffocated. A minute and careful examination disclosed neither tubercle, nor cavity, nor consolidation, nor lobular nor diffuse apoplexy, nor ruptured trunk, in any part of the parenchyma of the lungs; all the larger bronchi were nearly filled with blood, which was coagulated in them, particularly at and about the bifurcation, so as to obstruct the ingress of air. It was a case of bronchial hemorrhage—of copious sweating of blood from innumerable capillary tubes distended with blood. I say sweating, because I doubt there being any rupture or breach of surface.

In some forms of fever, sweating so profuse has occurred as to soak through the bed, and to accumulate in large quantities in a vessel placed underneath.

A capillary extravasation of red blood may be as profuse as a capillary exudation of white blood. A mucous membrane may copiously sweat blood; I have seen the same thing happen from the pores of the external skin of the face. One case, a very remarkable one, I shall briefly refer to. The patient was a

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young woman four or five-and-twenty years of age; herself intensely strumous, as were also her parents and brothers; she was subject early in life, both before and after puberty, to spontaneous epistaxis. She was attacked with fever. The symptoms presented the usual aspect of scarlatina; a dusky red rash was universally diffused, with sore and swollen throat, but no ulceration. There was a well-marked febrile movement in the system. On the third day the whole characters of the case were altered; fever subsided, the throat was no longer complained of. Quite suddenly petechiæ, some very small, some as large as a split pea, appeared under the cuticle, and were rapidly scattered over the whole surface; their color was livid, and they soon became black as ink. After the lapse of a few days dark grumous blood began to ooze from the gums, from all the points of junction of the internal and external skins, and from the nares, and appeared mixed with the urine and fæces; patches of ecchymosis stained the skin over large spaces. The debility, vascular and muscular, was extreme, and the fetor emanating from the breath and whole person in the highest degree offensive. All signs of scarlatina vanished.

In this miserable state, with a gradual augmentation of every worst symptom of purpura hemorrhagica in its most malignant form, she lingered on for nearly three weeks.

For many days before death the following remarkable phenomena manifested itself: Blood oozed and descended in streams from the pores of the skin of the face only. With intense interest I watched the process. The surface having been wiped clean, minute globules of dark blood were seen to exude from every pore; these rapidly increased in size, coalesced, and formed streams which flowed on every side; a profusion of blood was thus extravasated, in like manner as drops of rain increase in size in descending, unite, and form tortuous little rivers, on the glass of a window of a carriage.

Whether attributable to the great tenuity of the Schneiderian membrane, connected with delicacy of the sense of smell, or to the highly vascular network of this membrane, or to the copiousness of the supply of blood to the brain, or to all unitedly,

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certain it is, that of all the hemorrhages that are most frequent of occurrence is epistaxis.

To this variety of hemorrhage some are much more prone than others, and this may depend not only on constitutional causes, such, for example, as mal-organized blood, but also upon superior delicacy of the mucous membrane and its vessels; a condition of mucous membrane, as well as of external skin, frequently characteristic of struma. Whatever be the cause, the fact is certain, that blood streams from the nares with more facility than from any other mucous surface.

This is the case, in varied degrees, at every period of life, but much more remarkably so at the extremes of life; the most frequent time of occurrence of epistaxis is, however, during the period of growth. I have many interesting cases recorded which prove that this hemorrhage, having appeared in early youth, disappears during middle life, and returns as years accumulate and old age approaches. The period of senility varies much in differently constituted individuals, and is hastened or retarded by the events and habits of the past life.

It is a curious fact that the epistaxis of the growing period of life should, in so many instances, resume its sway towards its close. It may be termed the *Epistaxis redux* of advanced age. Within the last few days I attended a lady, now in her seventy-fourth year, affected with severe hemoptysis. Thrice before, several weeks having intervened, she was similarly affected, and twice, previously to the attacks of hemoptysis, she bled profusely from the nose. Inquiry elicited the following facts: In early life, antecedent to the full establishment of the catamenia, she had been a martyr to idiopathic epistaxis; at the menstruating periods she suffered habitually much pain, and the discharges were very profuse, and at the period of the cessation of the menses, when they recurred at long and irregular intervals, the hemorrhage was excessive and the blood came down in large clots. She had been married at a young age, but had never been pregnant. This old lady does not appear to labor under any organic disease; the heart's action and the breath-sounds

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are perfectly normal. I have on record several equivalent cases.

Considering, then, the facility with which blood is exuded from the nares, it is not contrary to anticipation that mental emotions should affect the vessels of the brain, as frequently to give rise to epistaxis. Congestions, inflammations, and diseases of the brain are frequently preceded and accompanied by epistaxis; this I shall have occasion hereafter more particularly to notice. Those mental emotions which produce cerebral congestion (for some, not all, produce this effect), are often signalized, and relieved too, by a flow of blood from the nares. Epistaxis is thus often a naturally provided safety valve. The following event, of which I happened to be an eye-witness, illustrates this principle: A child some two and a half or three years of age, in attempting to descend a flight of stairs, fell, and rolled down to the first landing-place. He was much hurt and cried bitterly. The nurse, a strong plethoric woman, greatly attached to the child, ran to take him in her arms; the child's father, at the head of the stairs, sternly forbade her to touch him; she was compelled (standing at the foot of the stairs) to look on. Another attempt (after many efforts and touching appeals for help) was made by the child to descend. Again, he fell. The nurse could endure it no longer; her feelings overpowered her. She rushed up stairs and took him in her arms, and exclaimed, in a highly excited tone, "If it cost her her life she would save the child." She became deeply flushed and a copious stream of blood rushed from both nostrils. This woman, whom I had frequent opportunity of afterwards seeing, had never been subject, previously or since, to any form or variety of abnormal hemorrhage. This was a well-marked instance of a strong mental emotion causing epistaxis, of temporary origin, and altogether exempted from any pre-existing or hereditary hemorrhagic diathesis. I shall, on a future occasion, notice how frequently this diathesis, connected with struma, is hereditary.

A lady, in her fortieth year, of florid complexion, and uncontrollable temper, in a fit of furious and unrestrained anger, was seized with epistaxis. Blood from both nostrils flowed in pro-

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fusion and persisted so long that the family became seriously alarmed. When I saw her she was nearly pulseless; there was a death-like pallor present, and a cold, clammy perspiration; her voice was feeble, and she could articulate only in a whisper, yet she did not appear to be alarmed. There was no time to be lost; much blood still flowed; much descended from the posterior nares and was swallowed; some hours previously she had vomited blood. Antecedent to my visit, all the usual means to check the blood-flow had been in vain employed. Upon close examination it was ascertained that the flow of blood was much more profuse from the left than from the right nostril, and by means of a flexible catheter passed along the floor of the nose, a plug with a strong silk thread firmly attached, was, through the mouth, introduced into the left posterior nostril. This completely controlled the blood-flow at that side; as it was not desirable too suddenly wholly to arrest the bleeding, the other nostril was not plugged. The loss on the right side became now comparatively small.

So much distress, so many unpleasant consequences have occasionally arisen from the plugging of both nostrils, that, whenever practicable, one of the air passages should be left free. The double plug is often needlessly applied. Sometimes, however, it is unavoidable. It may be well to remark, that if sponge be used for a plug, it is better to enclose it in lint, otherwise, when distended by moisture, it may so insinuate itself into the narrow spaces between the delicate bones of the nose, as to cause difficulty and even injury in its removal.

Months elapsed ere this lady recovered in health, strength and complexion, from this profuse and prolonged nasal hemorrhage. In early life she had been subject to idiopathic epistaxis; her menses were always superabundant, sometimes extremely profuse. At each of her confinements her losses of blood were enormous. About a week before the attack of epistaxis she had menstruated copiously. Her habits of life had always been temperate. Thus in this case, a fit of anger, or rather of fury, was the exciting cause of the epistaxis. But its dangerous pro-

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fusion is to be attributed to the pre-existence of a well-marked hemorrhagic diathesis.

The leading facts of another somewhat similar case shall be briefly detailed:

Mrs. S., aged 49, has ceased for a year and a half to menstruate. She is now laboring under organic disease of the heart. The symptoms indicate the existence of contracted orifice of the mitral valve. She has had two severe attacks of rheumatic fever, one before puberty, one at the age of 26. Eight years have elapsed since she first complained of dyspnœa and palpitation. Thirteen years ago she sustained a severe mental shock by the sudden and unexpected death of her mother, to whom she was fondly and devotedly attached; the more, perhaps, because, though long married, she was childless. The mental emotion produced by the suddenly imparted news of her mother's death was very great, she was seized with violent headache, which was followed by most profuse epistaxis; for three days the hemorrhage never ceased. She lived in a remote part of the west of Ireland, and it was not until the fourth morning after the commencement of the attack that the physician reached her house; he found her pulseless and apparently dying. He plugged both nostrils; she was unable to articulate, and with difficulty could swallow; she lay for upwards of three weeks in a state of insensibility; this period of time was a blank in her existence. She slowly recovered, but her natural complexion, vigor, and strength, she has never since then repossessed. In her case it is specially remarkable that, from the earliest age up to the full period of puberty, she has been subject to idiopathic epistaxis, so much so as to interfere with all her girlish amusements and occupations. The flow of blood was never during her early life profuse, but occurred so frequently, sometimes spontaneously, sometimes from the slightest causes, that she lived in a state of perpetual apprehension. When the menses were fully established the epistaxis ceased, and did not again recur till, as related, a powerful mental emotion recalled the latent predisposition, and accounted for its all but fatal persistence and profusion.

The influence of augmented heat or caloric upon the cerebral

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circulation, becomes a frequent cause of temporarily excited epistaxis. Hence it is that at the hottest season of the year hemorrhages in our climate are most frequent. Hence also it is that an over-heated bath, heated rooms, indulgence in ardent spirits, the sun-stroke, violent exercise, so affect the circulation that hemorrhages oftentimes immediately ensue. Intense thought long persisted in, renders the vessels of the brain turgid, and gives rise to a blood-flow.

Hence, too, the great imprudence and injury of ordering those patients threatened with phthisis, who evince the hemorrhagic diathesis, to over-heated and dry climates; those who labor under what I have elsewhere termed hemorrhagic phthsis should never be sent to a climate which tends directly to augment the existing and often fatal evil.

Those causes which suddenly excite and stimulate the heart's action, so as to propel blood more rapidly to the brain, do, in many persons, give rise to epistaxis. In fevers, at the commencement of the stage of reaction, this is especially and strongly exemplified. A flow of blood from the nares is the starting-point of many fevers, of none more frequently than the Rubeolæ.

Some months since I happened to attend two boys, each about ten years old, in the same room. They were playfellows and companions, but not relatives. I was much struck by the contrast between these two cases. One possessed a sound constitution, free from any hereditary taint, and had never been affected with idiopathic epistaxis. The other had not long recovered from a tedious and prolonged succession of strumous abscesses of the cervical glands, which left characteristic and deforming scars and cicatrices. From infancy he had been prone to distressing and perpetually recurring attacks of epistaxis. Twice the blood-flow was seriously profuse. Both these boys were attacked, within a few days of each other, with measles. At the time when the rash was beginning to appear they both complained of headache, and they both bled from the nose; the boy with untainted constitution had no recurrence of

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the bleeding, was greatly relieved by it, and passed through the disease without one untoward symptom; the boy who was marked with the signs of struma (both his parents were intensely strumous) during three days bled so frequently, so copiously, that his life was endangered. The former was in a few days perfectly restored; but months elapsed ere he who was marked with struma resumed his former ruddy and deceptive appearance of health.

Thus were evinced, in strongly contrasted relief, the temporary and salutary epistaxis of a perfect constitution, and the protracted and exhausting epistaxis of the distinctly impressed strumo-hemorrhagic diathesis.

Here it may be noticed how very distinct the hemorrhage of incoming fever is from that which takes place towards its close. Epistaxis is the most frequent variety of bleeding during the hot stage; intestinal, sometimes uterine, when the fever is advanced; and when, at this stage, it or any other variety of hemorrhage, sets in profusely, it is a most formidable symptom, and indicates the great change which has been wrought by continued febrile action in the component ingredients and constituency of the blood. At the ingress of the reaction of fever no material change has as yet been produced; towards the close the blood has been thinned and altered.

Of all the signs of the febrile movement the most invariable is wasting. No matter what the type, this is the most uniform result. Scanty are the supplies; the primary assimilative function is, in a great measure, suspended; so must be that of sanguification. The body feeds upon itself; as fever progresses the blood becomes more and more attenuated; and in those fevers which are caused by malaria and by animal and other poisons, the blood becomes so deteriorated, so reduced in tenacity and density, that it oozes and is exhaled from mucous surfaces. Thus a passive hemorrhage is produced, altogether distinct from the active hemorrhage which so frequently, at the incoming of fever, relieves the tension and increased action of the vessels of the brain.—*Medical Press and Circular.*

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WOUNDS OF THE ENDS OF THE FINGERS—TREATMENT BY SPLINTS.

By Irstus G. Cardner, M. D., New York.

Having at one time many wounds of the fingers in girls employed in a paper-collar manufactory, it gave an opportunity of making such wounds a special study.

The injuries were received while attending the embossing or stamping machines, and never involved more than the distal phalanx, and were always contused. Sometimes the flesh and nail were jammed off, leaving the phalanx uninjured; but more frequently the tip end of the phalanx was crumbled off, leaving a part of it projecting, and uncovered by the soft tissues. From the nature of the machines, the soft parts were uninjured up to the very point of contact with the die. One's first thought upon seeing a perfectly naked phalanx—full one-half to three-fourths of an inch in length—is to nip it off close to healthy flesh. But the timidity of the patients, and the fact that in some of the first cases a part of the phalanx was also gone, caused me to adopt a different course.

The object in view was to keep the surface of the phalanx constantly wet, and so dressed as to have nothing press closely against it, and to have the lotions so simple as to leave no sediment or resinous substance upon it, thus giving the freest scope to granulations, and to the growth of the skin. To secure this condition at first an anterior and a posterior splint was applied, extending an inch or so beyond the end of the phalanx. But on finding, as the granulations occurred, a flattened finger produced, I then used three splints; but obtaining a triangular finger, the plan of using four leather splints was uniformly adopted. The lotion consisted of a weak decoction of rum, opium and cort. hamamelis Virginianæ, with a little liq. sod.-chlor. added when indicated. After applying the splints they were firmly bandaged from above downward, a piece of lint wet with the lotion was inserted between the projecting ends of the splints, but not upon the phalanx; the whole hand was bandaged and kept wet with water. The lotion could be applied through the ends of the splints, which, therefore, were not re-

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moved until the finger was nearly well. Twice or three times a week, having unbandaged the ends of the splints, they could be turned back to inspect and cleanse the wound. The lotion was thought peculiarly adapted to contused wounds, and especially to favor healthy granulations.

The granulations sprung up slowly from the periosteum, if it was kept properly wet, but pushed forward faster from the free margin. In about ten days the bone would be completely covered, the finger of full size, and of any shape to which it might be moulded by the splint.

At this time, a complete outline of the nail—the nail *bed* in the corium—could be distinguished; but it, with the rest of the newly-formed finger, would be so tender that the slightest touch of the probe would cause bleeding. The early formation of the nail bed is evidence of the early development of the corium. The epithelium, or nail itself, was more slowly developed upon its bed, and great care was necessary to prevent deformity; therefore, at this stage, the real difficulty began. Having, then, newly-formed tissue, easily disturbed and destroyed, covered only by highly-sensitive corium, it required great patience to await the protecting growth of the nail and the epidermis.

The epidermis was more actively developed upon the corium along the border of the wound, giving it the appearance of growing up from the margin. By care on the part of the patient, the result was a perfect finger, if the phalanx was uninjured, with a well-formed nail, in from three to four weeks. The lotion and splints were continued until the epithelium had grown up to the end of the finger, when the remaining wound would be allowed to cicatrize, and applications of tinct. iod. be made.

In the case of Mary Finly, January 18, 1865, who had remarkably long fingers, the whole third phalanx of the second finger was exposed. The soft parts were torn from off the phalanx, exposing the insertion of the *extensor communis digitorum* muscle, and hung by the palmar tissue at the base of the phalanx. The soft parts were amputated, so as to leave a palmar flap uninjured, extending half way up the phalanx. This flap

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was trimmed, applied to the phalanx, and dressed in the manner above described. A perfect finger was the result.

When Attending Physician to the New York Dispensary, a patient applied to me to amputate his finger. The third phalanx, uninjured, was perfectly naked. It required great assurance to convince him that amputation was unnecessary, and that a perfect finger, with a good nail, would be produced. The splints were applied, but at the end of a week the fœtor and pain were so great that the patient was still more doubtful. Examination revealing healthy granulations, he was urged to persevere for another week. The patient was still doubtful; but when a second examination exhibited a finger of full size, and, over the granulations, the delicate tracings of a perfectly-formed nail, his surprise was amusing. The result was very satisfactory.

Cases might be multiplied; but these two are types, and sufficiently illustrate the treatment adopted. One thing was observed. In cases where the end of the phalanx was crumbled off, the finger was not much shortened. For there seems to be a tendency to pad out the end of the finger with fibrous tissue attached to the phalanx, so that with a nail of proper length, there is little deformity.—*New York Medical Journal.*

REPORT OF THE SCIENTIFIC COMMITTEE APPOINTED TO INVESTIGATE THE PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS OF THE HYPODERMIC METHOD OF INJECTION.

Without objecting to the word hypodermic, the committee resolved to employ the term subcutaneous in their report. The conclusions have been drawn from experiments on animals and on man in health and disease; from personal evidence of experienced medical men given before the committee; from records of facts and other communications in answer to a series of questions drawn up by the committee. The subject intrusted to the committee was the physiological and therapeutical effects of this method.

I.—*Physiological Division.* The first experiments were made

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to determine the quantity of water that can be injected under the skin. It was found that the quantity varies directly as the yielding and elastic quality of the skin at the locality injected. Watery solutions of drugs were used for injection, and it was found that neutral solutions, as a rule, were tolerated, but that very acid and very alkaline solutions were apt to cause irritation. Experiments were made for the purpose of comparing absorption by skin and vein, and it was found that a drug injected subcutaneously was far less rapidly absorbed and less intense in its effects than when it was introduced into a vein. In the numerous experiments made by the committee no symptoms have arisen which would lead them to conclude that the drug subcutaneously injected had been thrown into a vein. The pain of injection was found to depend to some extent on the density of the skin; the less the resistance presented to the needle, the less the pain presented on the puncture. The committee directed their attention to the effects of this method of administering various drugs, as compared with those methods in general use, viz.: the mouth and the rectum—and the special points examined were, the relative rapidity of absorption, the intensity and duration of the effects following each method of administration. The following alkaloids were used: Aconitia, atropia, morphia, strychnia, and quinia. Experiments were also made with Calabar bean, conia, hydrocyanic acid, iodide of potassium, podophyllin, colocynth, aloes, and Battley's solution of opium. In the experiments with aconitia on animals the local action of the drug was exhibited in different ways, though the general type of symptoms was the same by the three methods—by the mouth the drug affected the salivary glands, by the rectum it irritated the gut, by the skin it gave rise to local pain. The smallest dose found to produce death in rabbits was—by the mouth, $\frac{1}{80}$th gr.; by the rectum, $\frac{1}{50}$th gr.; by the skin, $\frac{1}{300}$th gr. With atropia it was found that there was a stage of excitement which followed the subcutaneous injection of the drug, and was a remarkable feature of this method. Tables of the effects of this drug on man were given, and it was found that $\frac{1}{100}$ part of grain subcutaneously was sufficient to

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accelerate the pulse considerably. The comparative effects of morphia by the three methods were then described; the train of symptoms was found to be closely similar. A table of the effects on rabbits and on man was given in a concise form, showing that the effects of the drug injected under the skin were more rapidly manifested and more intense than by the other methods. Some interesting results were obtained from the experiments made with quinia on man. When the drug was injected into the cellular tissue, considerable elevation of the temperature was observed, this symptom being slight or inappreciable when the drug was taken (in the same quantity) by the mouth or by the rectum. Series of experiments were made in a similar manner with Calabar bean, coniastrychnia, and hydrocyanic acid, and the results obtained were tabulated in a convenient form. Experiments were also made with iodide of potassium on a healthy man who had congenital extroversion of the bladder; the drug produced some local irritation, which prevented the completion of the series. A solution of podophyllin injected under the skin was found to give rise to free diuresis—a symptom which was characteristic of this method of administering the drug. Experiments were also made with solutions of colocynth and aloes, but considerable irritation followed their use.

II.—*Therapeutical Division.* The committee were limited in the number of drugs that could be used, from the locally irritating properties which some valuable medicines possess. Although many experiments were performed to test the value of local injections, the committee failed to obtain any evidence to show that the local predominates over the general effects. Investigations were then made of the therapeutical value of this method of administering various drugs. Aconitia was found to give rise to so much local tingling that the drug was considered unfit for subcutaneous injection. In case of simple neuralgia, atropia was considered to have a very beneficial effect when thus given, and in some cases more permanent relief was found to follow its injection than that of morphia. The committee believed that the value of morphia was materially enhanced by this method, as

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the action of the drug is not only secured with greater intensity and rapidity than by the ordinary modes, but the duration of its effects is prolonged. The same advantages characterize this mode of giving quinia in intermittent fevors, but some caution is requisite in giving large doses of this drug, as irritation may arise from its presence under the skiu. The conclusions which the committee deduce from their investigations were: 1. That, as a general rule, only clear neutral solutions of drugs should be injected, for such solutions rarely produce local irritation. 2. That, whether drugs be injected under the skin, or administered by the mouth or rectum, their chief physiological and therapeutical effects are the same in kind, though varying in degree. 3. But that symptoms are observed to follow the subcutaneous injection of some drugs which are absent when they are administered by the other methods, and, on the other hand, certain unpleasant symptoms which are apt to follow the introduction of the drugs by the mouth and rectum are not usually experienced when such drugs are injected under the skin. 4. That, as a general rule, to which, however, there may be exceptions, clear neutral solutions of drugs introduced subcutaneously are more rapidly absorbed and more intense in their effects than when introduced by the rectum or the mouth. 5. That no difference has been observed in the effects of a drug subcutaneously injected, whether it be near to, or at a distance from, the part affected. 6. That the advantages to be derived from this method of introducing drugs are: (*a*) rapidity of action; (*b*) intensity of effects; (*c*) economy of material; (*d*) certainty of action; (*e*) facility of introduction in certain cases; (*f*) with some drugs the avoidance of unpleasant symptoms. This plan, therefore, is most likely to be adopted where very rapid and decided effects are required from drugs which are operative in small doses.—*Medical Times and Gazette.*

Poisonous Flies have appeared in a great swarm in Transylvania, and killed more than 100 head of cattle. Men have to resort to tobacco smoke for protection.

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PERMANGANATE OF POTASH IN ACUTE RHEUMATISM.

By C. M. Fenn, M. D., of San Francisco.

An extract from a clinical lecture delivered by Dr. James F. Duncan, at the Adelaide Hospital, some time ago directed my attention to the use, among other remedies, of permanganate of potash in the treatment of rheumatism. I promised myself to make trial of the remedy at the first opportunity. Regarding the so-called chemical theory of the etiology and pathology of rheumatism as, at least, the most plausible, and believing the efficacy of the other salts of potash in that disease to be largely due to the measure of oxygen which they contain, it seemed to me that in this salt we possessed a remedy admirably adapted to meet all the indications; and that from the fact of its containing so large a proportion of oxygen (KO, Mn O), and holding the same in such loose affinity, we should be enabled most speedily to promote the transformation of lactic into carbonic acid. In apparent corroboration of this view, I append the record of three cases.

Case 1. Mr. S., salesman, æt. 30, after some unusual exposure, was prostrated by a severe attack of rheumatism. Upon an examination of his case the new remedy recurred to my mind. But the urgency of his symptoms was such that it seemed preferable to make use of the medicines we had some confidence in rather than fly to others we know not of. He was, therefore, ordered a preparation of potass, iodid., vin. colch. sem., etc., and submitted to a hypodermic injection of morph. acetas. one-fourth of a grain. To modify the exhausting and troublesome perspiration, he used, on the third day, a vinegar bath, with no appreciable relief. On the fourth day, discovering no change in his condition, other than might be ascribed to the daily hypodermic injections, I requested him to suspend the mixture and have half a grain of the permanganate, three times a day. At my next visit, on the following evening, I was surprised at the marked abatement of all the symptoms. The tongue was quite clean, the perspiration no longer excessive nor disagreeable, and the pains were so far relieved as almost to preclude the continuance

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of an anodyne. His convalescence was now constant and rapid, and on the tenth day from the commencement of the attack he was again at his post.

Case 2. Mrs. G., æt. 35, of full habit and previously healthy, was attacked during the passage from New York. There had been a considerable amelioration of the more violent symptoms at the time of her arrival here; but some of the larger joints were still tumid and painful. The permanganate of potash was resorted to, and in a few days she was able to attend to her household duties.

The third case I regarded as, in some sense, a crucial test of the remedy. The patient, a man in middle life, had long been a victim distorted with tophaceous deposits, and the malady was so far incurable. This was varied, however, at intervals of two or three months with acute attacks, which apparently resisted all the usual remedies, and expended their force in from two to three weeks. I had previously attended him in several of these attacks, and found the common remedies, colchicum, acetate of potash in large doses, etc., of but little avail. I now put him on the permanganate, and had the pleasure of seeing him on the street in seven days.

I find the raspberry syrup to be the best menstruum, as it disguises the somewhat nauseous taste of the medicine completely. —*Detroit Review.*

PERIOD OF THE GROWTH OF MAN.

Prof. B. A. Gould, from statistics derived from the register of two and a half millions of men in the United States Army, has brought out the fact that men attain the maximum stature much later than is generally supposed. This takes place commonly at 29 or 30 years of age; but there are frequent instances of growth until 35, not very noticeable—a yearly gain of a tenth of an inch, perhaps—still a growth. After 35, the stature subsides in similar proportions, partly, perhaps, from the condensa-

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tion of the cartilages, partly because of the change occurring in the angle of the hip bone. The age for maximum stature comes earliest on the tallest men, as if it were the necessity of unusual development. Foreigners were shorter than men of native birth. The height of men seemed to depend on the place of enlistment. A Massachusetts man enlisting in Iowa was an inch taller than if he stayed at home. As we go West, men grow taller. One man measured more than 6 feet ten inches. Out of 1,000,000 there were 5,000 who measured more than 6 feet 4 inches; but men of such stature do not wear well. In Maine men reach their greatest height at 27; in New Hampshire, at 35; in Massachusetts, at 29; in New Jersey, at 31. The tallest men, of 67 inches, come from Iowa. Maine, Vermont, Ohio, Indiana, Minnesota and Missouri give us men a little over 68; and the average of all shows the Americans to be "a very tall people."

TREATMENT OF INEBRIATES.—Dr. Day, the Superintendent of the Binghamton (New York) Inebriate Asylum, publishes a letter, in which he advocates the practice of totally withdrawing from the habitual drinker all liquor, in opposition to the prevalent idea that the patient must be gradually weaned from the use of alcoholic substances, and founds his assertion on the fact that he has treated 2,500 cases of inebriety during the past ten years. He believes that the man who has been in the habit of drinking a quart of liquor per day will suffer more by being allowed only a pint and gradually less within the same lapse of time than he will if he is kept altogether from the use of it. The blood of such patients is, in his opinion, poisoned by the substances which alcoholic liquors contain, and he does not, therefore, see the necessity of administering any more of such poisons, even in the infinitesimal doses. He belives that nothing short of absolute abstinence will keep the inebriate cured, after he is raised up from his former life of degradation.

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THE MEDICAL REPORTER.

ST. LOUIS, JANUARY 15, 1868.

REVIEWS.

ON DISEASES OF THE LUNGS AND AIR PASSAGES; THEIR PATHOLOGY, PHYSICAL DIAGNOSIS, SYMPTOMS AND TREATMENT. By HENRY WILLIAM FULLER, M. D., Cantab. From the Second and Revised London Edition. Philadelphia: H. C. Lea. 1867.

The title of this work sufficiently discloses the nature of the contents; one more work to the list of those which seek to elucidate the diseases of the chest. We do not object to them; only when the student comes to choose, he is confused amid the multitude, and mayhap will select the more elaborate, because the quantity seems the more attractive; but this excess of information will be his ruin, unless he be firmly grounded in the principles of physical diagnosis, for the great refinement that has of late years crept into the study of auscultation and percussion requires, even with the older practitioner, a constant recurrence to his fundamental ideas of dry and moist sounds.

The present work, however, is good, and may very properly be recommended to the student after he has gained some insight by a practical acquaintance with the subject at the bedside.

The chapter on Pulmonary Consumption is valuable from its thoroughness, and as a matter of review, is well worth the work which contains it. Altogether we can rank the work with those of similar purport, as one more valuable addition on a subject which can not be too faithfully studied by the physician.

EPIDEMIC MENINGITIS, OR CEREBRO-SPINAL MENINGITIS. By A. STILLE, M. D., Prof. of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Philadelphia: Lindsay & Blakiston. 1867.

This very excellent monograph on a subject, perhaps not so well known in the West, is the result of the clinical observations by Prof. Stille. He enters most thoroughly into the discussion of the nature of the disease and its treatment, and gives us in small space all that is of any positive value regarding it. The work is highly characteristic of the author's well-known medical ability; we see the master hand throughout, and among the

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many scientific works which are constantly issued, this will stand in the front rank, and be recognized as a real gift to the profession.

THE PRINCIPLES AND PRACTICE OF LARYNGOSCOPY AND RHINOSCOPY—with fifty-nine engravings on wood. By ANTOINE RUPPANER, M. D., M. A. Simpson & Co. New York: 1863.

A book of this kind is well worth possession at the present time, when the subject is being so extensively treated, as well in the periodicals as in larger works. The substance of this work is devoted to the history of Laryngoscopy and Rhinoscopy, their practice, and the therapeutic results from such knowledge. Without entering very deeply into the consideration of the subject, it is sufficiently elaborated to give the general practitioner clear ideas as to the nature of the procedure and its value. The work is gotten up in the highest typographical art of Simpson & Co.

HEADACHES: THEIR CAUSES AND CURE. By H. G. WRIGHT, M. D., M. R. C. S. L., L. S. A. From the Fourth London Edition. Philadelphia: Lindsay & Blakiston. 1867.

A very excellent essay on this subject, written in a pleasing manner, and adapted to the understanding of the people, for whom it may in part have been written. Without being what is generally called a scientific work, the physician will readily refer all the symptoms of headache, in their great variety, for they are here carefully detailed, to their proper causes, and reveal the same conclusions which are laid down in the book, as to the treatment. It is a very good synopsis of the observations made by the physician in every day practice, and as such will bear the perusal which like books should receive, to systematize occasionally our thoughts and relieve the mind when overtasked by more abstruse questions of pathology.

HYSTERIA. SIX LECTURES DELIVERED TO THE STUDENTS OF ST. BARTHOLOMEW'S HOSPITAL, 1866. By F. C. SKEY, F. R. S. New York: A. Simpson & Co. 1867.

A very excellent little monograph, as exhibiting the true method of treatment in Hysteria, and sundry allied diseases, by tonics, instead of by depletives. We agree with the author fully in the idea, that more is to be obtained, in general, by support, than by the opposite course, in our efforts to cure disease,

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a principle which not many of the profession are inclined to adopt. The six lectures given in the above work are well worthy perusal, and we hope that they will be extensively circulated, especially in the younger portion of the fraternity. We have read of late no work which deserves more careful consideration.

St. Louis Medical Society—Election of Officers.—The annual meeting for the election of officers of the St. Louis Medical Society was held on Saturday evening, January 4, at the Mercantile Library Hall, and the following were elected officers for the ensuing year:

President, Dr. E. Montgomery; Vice President, Dr. G. M. B. Maughs; Recording Secretary, Dr. W. B. Outten; Corresponding Secretary, Dr. D. V. Dean; Treasurer, Dr. G. F. Dudley; Librarian, Dr. G. Hurt.

Committee on Elections—Drs. D. McDowell, A. Hammer, J. H. Watters, Wm. Johnston, A. Keuckelhan, J. W. Clemens and Thos. Scott.

Executive Committee—Drs. T. Kennard, J. M. Leete and B. F. Shumard.

Committee on Publications—Drs. G. H. Baumgarten, J. L. Whipple and J. S. B. Alleyne.

St. Louis College of Pharmacy.—The following are the officers and faculty of this Institution:

President, F. Sennewald; 1st Vice President, Theodore Kalb; 2d Vice President, M. W. Alexander; Corresponding Secretary, Hubert Primm; Recording Secretary, Edward P. Walsh; Treasurer, Charles L. Lips, M. D.; President Board Trustees, M. W. Alexander; Secretary Board Trustees, James McBride.

Faculty—Felix McArdle, M. D., Professor of Chemistry; Hubert Primm, Ph. D., Professor of Pharmacy; O. F. Potter, M. D., Professor of Materia Medica, and Dean of the Faculty.

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St. Louis Academy of Science.—At the annual meeting of the Academy of Science, held Monday, January 6, 1868, the following were elected officers for the ensuing year:

President, B. F. Shumard, M. D.; 1st Vice President, A. Wislizenus, M. D.; 2d Vice President, C. W. Stevens, M. D.; Corresponding Secretary, N. Holmes, Esq; Recording Secretary, O. F. Potter, M. D.; Treasurer, Enno Sanders, Ph. D.; Librarian, G. Baumgarten, M. D.

Young Men's Medical Association.—At the annual meeting of this Society the following were elected officers for the ensuing year:

President, E. E. Coleman; Vice President, W. B. Outten; Corresponding Secretary, Geo. Blickhahn; Recording Secretary, A. J. Steele; Treasurer, Wm. Niehaus; Curator and Librarian, J. M. Youngblood.

The Quarterly Journal of Psychological Medicine and Medical Jurisprudence, edited by William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System in the Bellevue Hospital Medical College, etc. A new volume of this valuable journal will be commenced with the January number. The two numbers already published, constituting the first volume, have received the uniform commendations of the press, and the circulation is now so extensive that the publishers are enabled to still further enlarge it, and to bring it out with increased typographical, scientific and literary excellence.

We can earnestly recommend this journal to our readers, and as it fills a place which no other Medical journal attempts, it should be added to the list of periodicals essentially necessary to complete the library of every intelligent physician and lawyer. The publishers deserve great credit for the very elegant manner in which the work is gotten up, which is, however, characteristic of all the publications issued from the celebrated Agathynian Press. Subscription price $5 per annum. Address Moorhead,

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Simpson & Bond, 60 Duane street, New York. We will furnish the above journal and the St. Louis Medical Reporter, one year, for $7.

The American Journal of Obstetrics, and Diseases of Women and Children, edited by E. Noeggerath, M. D., Physician to the German Hospital and Dispensary, and B. F. Dawson, M. D., Assistant to the Professor of Obstetrics in the College of Physicians and Surgeons.

The above journal will be published on May 1st, 1868, and quarterly thereafter. It will consist of 96 pages, elegantly printed, and will contain original articles, reports of societies, hospitals, lectures, and a complete review of foreign and domestic literature on the above subjects.

Articles for the Journal, and subscriptions, are solicited, which, together with all communications, are to be addressed to the publisher. Terms, $3 a year in advance, single copies $1. Moorhead, Simpson & Bond, 60 Duane street, New York.

We are glad to see the above announcement, and from the known enterprise and ability of the publishers can confidently recommend the work.

Extraordinary Fecundity.—Doctor Becker Laurich, of Rouneburg, communicated to the Gynacological Society, the history of a woman, twelve years married, and actually enceinte for the nineteenth time. Her first child was born at full moon; then she aborted nine successive times at four months, then gave birth to a child at eight months, afterwards aborted seven times in succession at the fourth month. At present she is again enceinte, but there are symptoms of approaching abortion, such as a serosanguinolent discharge, etc., and it is not probable she will reach the term of gestation, in consequence of her numerous and laborious occupations. Notwithstanding the violent hemorrhage which attended each abortion, and which often endangered life, she is a stout, hearty-looking woman.

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Mortality of the City of Providence, R. I.—We append the following table of the deaths in the city of Providence, R. I., for the past four years, from the report of Dr. E. M. Snow, City Register:

Year.	Population.	Deaths.	Deaths in pop., 1 in
1864	53,810	1,281	42.01
1865	54,595	1,211	45.08
1866	55,600	1,036	53.67
1867	56,800	960	59.16

We are under especial obligation to Dr. Snow for his monthly and annual reports—would every city had as able and correct a Register. His reports are examples of excellence, worthy of the highest praise.

VITAL STATISTICS OF ST. LOUIS.

From December 1, to December 31, 1867.

Furnished for the St. Louis Medical Reporter, from the official records.

DEATHS DURING THE ABOVE PERIOD.

White Males	241	Still Born	38
White Females	158	Under five years of age	177
Colored Males	18	Between five and twenty years	40
Colored Females	16	Between twenty and forty years	104
Born in the United States	315	Between forty and sixty years	47
Born in Germany	62	Between sixty and eighty years	24
Born in Ireland	38	Bet. eighty and one hundred y'rs	3
Born in other countries	18	Total	433

DISEASES.

Abscess	3	Fever Intermittent	5
Accidents	4	Fever Remittent	6
Albuminuria	1	Fever Typhoid	23
Apoplexy	4	Gastritis	4
Atropia	3	Gangrena	1
Bronchitis	13	Hemorrhage	3
Burns and scalds	7	Hepatitis	4
Cancer	3	Hydrocephalus	6
Carditis	4	Hydrothorax	1
Cerebritis	12	Labor	2
Cholera Morbus	12	Laryngitis	3
Cholera Infantum	6	Marasmus	13
Convulsions	10	Meningitis	11
Congestion of Brain	16	Nephritis	2
Croup	8	Old Age	2
Dentition	8	Paralysis	2
Delirium Tremens	2	Peritonitis	8
Disease of the Heart	6	Pertussis	4
Diarrhœa	24	Phthisis	38
Diphtheria	6	Pneumonia	45
Dropsy	5	Premature Birth	4
Dysentery	10	Scarlatina	4
Enteritis	7	Scrofula	4
Epilepsy	1	Syphilis	1
Erysipelas	4	Tetanus	2
Fever Bilious	6	Trismus	4
Fever Congestive	4	Unknown	4

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THE SAINT LOUIS
MEDICAL REPORTER,
A SEMI-MONTHLY RECORD OF MEDICINE AND SURGERY,
EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, FEBRUARY 1, 1868. No. 23.

VITAL STATISTICS OF ST. LOUIS FOR THE YEAR 1867.

By O. F. POTTER, M. D.

[Communicated for the St. Louis Medical Reporter.]

We propose to present a condensed report of the mortality of our city, as far as our data will permit, for the past year, making as minute a classification of age, sex and disease, as possible, and as in our article on the same subject for 1866, place on record for comparative results the pecular character and diversity of disease with which we have been visited. Statistical records only become valuable by accumulated observations, and owing to the great improvements instituted by our Board of Health in keeping the records of the Health office, a very considerable degree of accuracy can now be obtained, and we propose, by continued yearly reports, to furnish a basis for useful and reliable calculations as to the future health of our community, as well as to the provisions required to improve the same. With a constantly increasing population it behooves those appointed as guardians of the public health to do every thing in their power to guard against epidemic and contagious diseases, as well as to improve the condition requisite to the general perservation of the health of the city. The past has been eminently a healthy year, an improvement on the previous one, especially as regards epidemic and contagious diseases. There were 6,570 deaths in St. Louis during the past year. In 1866 there were 9,280, showing a difference of 2,710 in favor of 1867.

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TABLE No. 1,

Showing the number of deaths during each month of the year 1867, *with age, sex and birth place, inclusive.*

1867—MONTH.	Total number of deaths.	White Males.	White Females.	Colored Males.	Colored Females.	Still Born.	Under 5 years.	Bet. 5 and 20.	Bet. 20 and 40.	Bet. 40 and 60.	Bet. 60 and 80.	Bet. 80 and 100.	NATIVITIES.															
													United States	Germany.	Ireland.	England.	Scotland.	Switzerland.	Canada.	Prussia.	France.	Bohemia.	Italy.	West Indies.	Denmark.	Sweden.	Holland.	Greece.
January	380	185	151	24	20	38	155	43	75	48	16	5	252	64	49	3	1	3	..	..	3	2	2	..	1	..	..	..
February	295	155	111	18	11	37	122	26	66	28	14	2	195	48	43	2	1	..	1	1	..	1	..	..	..	1	1	1
March	366	198	139	16	13	30	155	35	92	33	16	5	234	66	45	4	5	5	2	3	..	1	..	..	..	1	..	..
April	375	192	145	22	16	26	162	36	85	32	25	9	258	56	45	6	..	2	1	3	2	1	..	1	..	..	..	..
May	326	170	128	17	16	30	156	31	48	46	12	3	241	47	23	3	..	3	3	..	4	..	..	..	..	..	2	..
June	335	188	122	13	12	27	143	39	78	35	10	3	237	46	41	2	..	1	..	1	1	2	2	..	1	1	..	..
July	620	340	248	20	12	33	411	41	81	37	14	3	512	54	41	6	..	..	1	..	1	4	..	1	..	..	..	..
August	383	438	387	27	31	37	474	69	101	87	22	3	656	128	68	15	1	3	2	..	3	2	2	2	1	..	..	..
September	1120	603	443	38	36	34	434	132	330	140	44	6	742	172	155	20	5	4	6	2	6	2	1	2	1	..	1	1
October	915	471	402	20	22	32	341	114	247	126	47	8	611	156	111	19	3	2	2	..	6	4	1	..	..	..	..	..
November	532	268	213	28	18	36	220	41	134	62	24	5	340	94	70	6	..	4	..	4	4	..	..	..	..	..	..	..
December	433	241	158	18	16	38	177	40	104	47	24	3	315	62	38	6	..	..	1	..	7	1	3	..	..	..	..	..
Total	6570	3449	2642	256	223	398	2950	647	531	721	268	55	4593	993	729	92	16	27	19	14	37	20	11	6	4	3	4	2

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The difference is, however, mainly in deaths from cholera and cholera causes.

In table No. 1 we show in a condensed form; the sex, color, birth place and comparative age of the decedents. This table is mainly condensed from our monthly reports, as published in the Medical Reporter from time to time, as also is our table of the diseases which follows:

As above stated the entire number of deaths during the year were 6,570, and estimating the population at 230,000, gives only about one death to every thirty-five inhabitants, while last year there were about one to every twenty-two inhabitants. This favorable showing for the past year results in part from the smaller number of deaths from epidemic cholera, and also, we are fully convinced, in part from the improved sanitary condition of our city, resulting from the activity of our worthy Mayor and the wise provisions instituted by our Board of Health.

Of the above number 3,705 were males; 2,865 females, showing 840 more deaths of males than females. Of the above 479 were colored persons, at least that number were so reported. The number of children still born, 398, is in excess of last year by 24, showing, from some unexplained cause, an increased proportion to the gross number of deaths; this, with the number of deaths of children under five years of age, 2,950, is one of the misfortunes incident to city life; in part caused by poverty and neglect, but frequently, we fear, in the former class, from willful act of the mother, aided by the many nostrums so publicly advertised for that purpose, or at least so understood, and also by a class of persons, unfortunately too many, who live by such unholy practice. The next highest number, as regards age, is from forty to sixty, being 721; then, as was the case last year, comes those from five to twenty, amounting to 647 deaths. The number of aged persons is less in proportion than last year, and none were reported over 100 years of age.

Of the number of deaths 650 occurred in the several hospitals of the city, many of which came here sick and were not really residents.

There were 4,598 deaths of persons born in the United States,

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TABLE No. 2,

Showing the Various Diseases and Number of Deaths from each Disease, for each Month during the Year 1867.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	December.	Total.
Abscess	....	3	3	....	2	3	3	1	2	2	1	3	23
Accidents	7	3	3	4	3	6	10	3	12	3	5	4	78
Albuminuria	2	....	4	3	....	1	....	....	....	2	....	1	13
Aneurism	1	....	....	....	....	1	....	....	....	1	....	....	3
Apoplexy	2	3	7	6	2	4	5	3	3	9	6	4	69
Asthma	2	....	4	5	1	3	....	1	4	....	2	....	23
Asphyxia	....	1	2	2	1	2	4	2	2	....	....	....	16
Atropia	....	....	1	2	....	2	2	1	5	5	4	3	25
Bronchitis	10	10	14	10	7	5	6	7	7	5	13	13	107
Burns and Scalds	....	4	2	2	2	2	2	1	1	1	2	7	26
Cancer	3	4	1	3	1	4	1	1	2	2	2	3	27
Carditis	4	4	3	5	5	4	4	4	2	3	3	4	44
Cerebritis	4	5	6	5	6	10	12	8	7	9	8	11	91
Cholera Epidemic	....	....	....	....	....	6	8	105	308	229	29	1	686
Cholera Morbus	....	....	....	....	....	4	20	126	193	110	23	12	488
Cholera Infantum	....	....	....	....	....	3	56	77	81	32	7	6	267
Convulsions	25	15	21	15	10	9	46	52	25	28	21	10	277
Congestion of Brain	4	6	6	3	5	3	18	31	26	15	11	16	148
Coxyalgia	....	....	....	....	....	....	....	....	....	1	....	....	1
Croup	6	4	4	6	5	3	3	3	4	5	14	3	65
Cyanosis	....	....	1	....	....	1	1	1	1	....	....	....	5
Cystitis	1	....	....	1	....	....	....	....	....	1	4	....	7
Dentition	....	....	3	4	3	....	15	12	7	3	3	3	63
Delirium Tremens	....	....	2	2	2	2	1	1	4	5	3	2	24
Disease of Heart	....	....	....	4	....	1	5	5	6	2	4	6	33
Diarrhœa	3	3	7	5	3	4	28	60	21	41	12	24	211
Diphtheria	4	5	7	5	2	2	2	1	5	3	6	6	43
Dropsy	5	5	5	3	5	3	1	3	2	2	2	5	46
Drowned	....	....	3	1	2	3	5	....	....	....	....	....	14
Dysentery	....	....	4	5	3	4	16	29	21	35	20	10	147
Dyspepsia	....	1	1	1	....	....	1	....	....	1	....	....	5
Eclampsia	....	1	....	2	1	....	3	1	....	1	2	....	11
Encephalitis	....	....	2	5	2	2	5	....	....	....	....	....	16
Enteritis	10	3	11	6	6	3	16	13	10	10	14	7	114
Epilepsy	2	1	....	....	....	1	2	1	....	....	1	1	9
Erysipelas	2	1	3	4	3	2	4	1	....	5	2	4	31
Fever Bilious	4	4	3	2	2	5	5	9	20	14	6	6	80
Fever Congestive	....	4	2	5	4	4	4	14	15	15	11	4	82
Fever Intermittent	....	3	6	4	6	5	12	18	22	15	12	5	108
Fever Remittent	....	6	4	2	6	5	3	10	17	11	10	6	85
Fever Puerperal	5	5	6	3	5	4	4	4	6	5	3	....	50
Fever Yellow	....	....	....	....	....	....	....	....	....	....	1	....	1
Fever Typhoid	36	23	15	16	13	26	45	41	43	30	17	23	328
Fracture	....	....	....	....	....	2	....	1	....	....	....	....	3
Gastritis	4	2	4	4	3	2	2	5	9	5	5	4	49
Gangrene	4	....	2	1	1	....	....	....	....	1	1	1	11
Hemorrhage	....	....	....	1	1	2	3	3	7	5	6	3	31
Hepatitis	2	5	3	6	3	4	6	5	5	14	7	4	64
Hydrocephalus	5	4	3	10	11	4	10	11	21	10	5	6	100
Hydrothorax	3	....	2	4	3	....	....	....	....	1	1	1	15
Jaundice	3	....	1	1	....	....	1	....	1	....	....	....	7
Labor	3	4	....	2	....	2	1	2	....	....	....	2	16
Laryngitis	2	1	4	2	2	....	....	....	....	4	2	3	20
Marasmus	21	12	19	18	20	15	33	32	40	29	30	13	282
Meningitis	8	2	5	16	7	17	28	29	22	30	23	11	198
Metritis	1	....	....	1	1	....	....	....	....	....	2	....	5
Nephritis	1	....	....	....	1	....	....	....	....	....	....	2	4
Occulsion of Rectum	1	....	....	....	....	....	....	....	....	....	....	....	1
Ovarian Tumor	....	....	....	1	....	....	....	....	....	....	....	....	1
Old Age	....	1	2	2	1	....	1	....	1	2	2	2	14
Paralysis	....	2	3	4	4	2	4	3	2	5	4	2	35

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TABLE No. 2—Continued.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Peritonitis	2	1	3	6	8	6	8	8	11	8	5	8	74
Pertussis	9	3	4	5	10	5	12	5	6	9	6	4	78
Phthisis	58	34	42	38	35	35	37	32	33	31	42	38	455
Pneumonia	57	29	52	42	33	32	27	17	18	24	30	45	406
Poisoning	....	....	2	....	2	2	3	2	1	2	1	....	15
Premature Birth	1	....	....	....	5	....	5	4	4	6	6	4	35
Rachitis	1	....	....	....	....	....	....	1	....	....	....	....	2
Rheumatism	....	2	2	2	2	2	....	....	....	2	2	....	14
Rubeola	....	2	7	6	6	3	....	....	1	4	2	....	31
Scarlatina	3	2	2	4	2	5	9	1	3	5	4	4	44
Scrofula	....	2	1	1	4	....	2	2	2	2	3	4	23
Sun Stroke	....	....	....	....	1	2	2	3	....	....	....	....	8
Suicide	....	....	....	1	....	....	....	4	3	1	....	....	9
Syphilis	1	1	....	3	2	2	....	....	....	2	2	1	14
Tetanus	1	3	....	....	2	2	4	3	3	5	6	2	31
Trismus	5	2	1	2	3	....	6	13	4	7	5	4	52
Unknown	2	3	1	3	2	1	....	....	....	....	....	4	16
Variola	2	1	....	2	2	..	....	....	....	....	....	....	7
Wounds	....	4	....	....	2	4	....	....	....	....	....	....	10
Totals	342	258	336	349	296	308	387	346	1086	883	496	395	6172
Still Born	....	....	....	....	....	....	....	....	....	....	....	....	398
Net	....	....	....	....	....	....	....	....	....	....	....	....	5570

and 1,977 of persons of foreign birth, fully one-half of whom were from Germany, being 993, and from Ireland 729, while from all other foreign countries, there were only 255 deaths, thus indicating the great preponderance of Germans and Irish among our foreign population.

Of the various diseases which we have enumerated, some eighty in number, we find that the greatest mortality was from diseases affecting the bowels, even leaving out cholera and cholera causes, amounting to some 950 deaths; still we are inclined to think this great preponderance was mainly due to causes operating to the favorable developing of the epidemic, as we see under the head of cholera morbus, 488 deaths reported; cholera infantum, 267; diarrhœa, 211, and dysentery 147 deaths, all largely in excess of what is usual during common seasons; especially is this excess noticable with the first named, as 488 deaths from cholera morbus is a most improbable number from what is generally so rare a disease. The next in order comes fevers, which were unusually fatal during the year, and of which near one-half were from typhoid fever alone, being 326 deaths; we had also one death from yellow fever, a case having been

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brought up from the South on a steamboat, and died at the Marine hospital.

From diseases of the lungs there were 698 deaths, and from diseases of the brain, proper, 612, and from spasmodic diseases 415 deaths. Pneumonia and Phthsis prevails to a very alarming extent in our city, and the monthly reports show that no part of the year is exempt from their ravages, although in the first and last months the mortality is somewhat greater than during the warm weather.

We have been peculiarly exempt from all kinds of contagious diseases, there being only 160 deaths from this class, of which only 7 were from Variola, and 44 from Scarlatina, which latter prevailed to some extent throughout the year. The number of deaths from suicide is the same as of last year, 9, but a less proportion were from the use of opium. The number from accidents is some less than last year, 26, being from burns and scalds.

TABLE No. 8,

Showing the Number of Deaths from Cholera and Diseases influenced by Cholera, in the City of St. Louis, in the Epidemics which have occurred from 1849 to 1867.

Years.	Deaths Reported from Epidemic Cholera.	Deaths from Diseases Influenced by or not reported Epidemic Cholera.	Total Number of Deaths from all Cholera causes.	Number of Deaths per 100 Inhabitants from Reported Epidemic Cholera	Number of Deaths of Males Reported as Epidemic Cholera.	Number of Deaths of Females Reported as Epidemic Cholera.
1849.....	4,317	713	5,030	54.0	2,237	2,070
1850.....	883	142	1,025	9.8	463	421
1851.....	845	140	985	8.4	436	409
1852.....	802	133	935	7.3	412	390
1853.....	205	35	240	2.2	107	98
1854.....	1,533	255	1,788	12.0	798	735
1866.....	3,527	628	4,155	17.3	1,825	1,702
1867.....	686	344	1,030	3.0	369	317

We have appended in Table No. 3 a condensed statement of epidemic cholera and diseases influenced thereby, for the several years in which our city has been visited, thinking that the experience of the past might form some criterion to judge of our future prospects as regards this terrible scourge. We find by

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the table that after the first year, 1849, that it showed some considerable tendency to remain as a permanent disease, maintaining some degree of regularity as regards numbers, until 1853, in which it almost disappeared, when in 1854 it suddenly increased to a very alarming extent, but this proved its expiring effort, and we were free from it until 1866. In all past years there were really more deaths from cholera than reported; in an old table we find some 16 per cent. additional set down as from cholera causes. We made the same observation in our table for the year 1866, but in the past year the proportion was very largely greater, and we have, therefore, and we think justifiably, added 50 per cent. additional as due from cholera causes, making really 1,030 deaths due to the influence of the epidemic. We think that the past is to some extent a good basis to judge of the future, and also seeing the cholera still existing in various parts of the country, especially the sea board cities, that it stands us well in hand to be prepared for a visitation again during the coming season, for we have really greater reason to expect its visitation during the present than we had in the past year, and we trust that our Board of Health will bear in mind the fact of the great benefits which accrued from their timely action last year, and that they will act in the same prompt and energetic manner the coming season, and in which action we feel assured the great mass of the people will fully sustain them.

We are pleased to see that the suggestion of last year, as regards burial certificates, has been adopted at the Health office, and now our reports, as far as they go, are positively accurate. We wish that the system of registry, as regards births and marriages, could also be as thoroughly enforced, as we see it is in Providence, R. I., as it would add greatly to the value of our statistics, and in this respect we would say that the degree of perfection attained in statistics by our friend and correspondent, Dr. Edwin M. Snow, Register of Health of the above city, is well worth the imitation and adoption of every city and county in the country. But we feel pleased at the advance we have already made, and trust that future improvement will gradually obtain. In compiling our tables we have made use

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of several old tables in our possession, made years ago, from data then at hand, and from our regularly published reports, as condensed from the weekly reports of the Health office, and from other reliable and trustworthy sources.

INHALATION OF ATOMIZED FLUIDS AND THE APPARATUS FOR LOCAL ANÆSTHESIA AND ATOMIZATION OF LIQUIDS; ALSO, DESCRIPTION OF THE METHOD AND APPARATUS FOR TREATING DISEASES OF NASAL PASSAGES ON A NEW PLAN.

We have presented the following selections, together with a description of the apparatus used in applying remedies by means of the Atomizer, feeling that we could present nothing of more interest to our readers than to place before them the most improved instruments now made for that purpose. We are under obligations to Messrs. Codman & Shurtliff, of Boston, for the use of the cuts, and we would refer our friends to this enterprising house should they wish to purchase any of the instruments below described.

We append the following from an article of Dr. H. Beigel, in the *London Lancet:*

On the Inhalation of Atomized Fluids.—The application of medicaments is effected in a two-fold manner, viz.: either directly, on being applied immediately to the suffering part, or indirectly, by being received into the circulation of the blood; so that through this agency, which reaches all parts of the body, it may also affect those parts on which we intend to act. Where a direct influence is possible to the physician, he will never think of attempting to reach his aim by circuitous routes. The straight way in medicine is also the best and most effectual, and those branches of our art which could pursue this direct track have enjoyed quick and conspicuous progress. We need only call to our mind surgery, opthalmology, midwifery, and partly, also, the treatment of skin diseases.

But it is not very long since, that even in such cases as catarrh of the conjunctiva, simple ulcers, scabies, etc., very many compound medicines were ordered—a kind of therapeutics

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which disappeared with the development of local treatment. Many parts of the body will certainly, by their position, ever exclude a direct proceeding in the matter just spoken of; as, for instance, the basis cranii, the heart, the pancreas, spleen, kidneys, etc., because no natural duct leads us to them. But the natural ways leading to others, which are therefore within our reach, have not been sufficiently appreciated. This was the case with the organs of respiration. The cavum oris and the pharynx were too easily accessible to be overlooked; but the glottis was considered a stoppage for any further advance, and the trespassing on which is almost impossible. One thing remains remarkable: It has always been observed, that one of the most important occurrences in life, respiration, proceeds in the most immediate manner; that the inhalation of different gases produces very marked effects upon the organism; and although man was, and usually is, so ready to imitate easily explicable phenomena of Nature, and to use them for his benefit, nevertheless the attempts to gain influence upon the body, and particularly upon the organs of respiration, through breathing an artificially-created atmosphere, were very rare.

Grecian, Roman and Arabian physicians recommended inhalations, but never attempted to use anything but vapors and fumigations; so that a non-volatile chemical body could not come into contact with the organs of respiration. But at all times the urgent necessity of immediate application of medicaments to the organs of respiration was so much felt, that Mascagni, a very renowned physician, once said, "If ever a specific should be devised against consumption, it would be such as to be introduced into the organism through the windpipe." Besides this inhalation, some physicians of later date made use of blowing pulverized medicaments into the larynx in diseases of that organ. Aretaeus made use of a tube for blowing, which method in our times has been renewed with great benefit by Trousseau and other physicians. In many Continental spas, arrangements were made to create an an atmosphere suffused with mineral water, which the patient was recommended to inhale. But, inasmuch as the mineral water was turned into

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vapor, it need not be said that the so-called "vaporatoria," or inhalation saloons, were filled merely with common water vapors.

In 1849, Auphan, of Euzet-les-Bains, originated the idea of atomizing the mineral water, by throwing a jet of the liquid against the wall of the inhalatory. After a short time, the same system was adopted in Lamotte-les-Bains. But Sales-Giron first constructed at Pierrefonds an apparatus through which the fluid was subdivided into a fine vapor, which was inhaled by the patients with great benefit. His chief merit consists in his transferring this method from the vaporatory of the spas, to which it was hitherto restricted, into the hands of every physician, by devising a portable inhalation apparatus. Thus a long-cherished wish of physicians was realized, and from that time a new era in the local therapy of the organs of respiration commences. This apparatus of Sales-Giron consists of a vessel filled with the fluid which is to be atomized. Above this vessel an air pump is placed, which compresses the air above the surface of the water. The pressure is indicated by manumetre. The water escapes through a fine opening of a tube, and strikes against a small metal disc, where it is turned into very minute vapor, which is inhaled by the patient. When Sales-Giron placed the results obtained in his vaporatory, and some years later his portable apparatus, before the Acadèmie de Mèdecine, of Paris, great sensation was caused. At first it was questioned whether the atomized fluids reached the larynx, the trachea and the lungs. Different opinions arose, and various experimenters arrived at different results. Meanwhile the new method gained more partisans. At last the Acadèmie de Mèdecine took the investigation into their own hands, and on January 7th, 1862, Poggiale, the reporter of the elected committee, in a deeply interesting, extensive and brilliant discourse, gave a substantiated statement of the case, based upon experiments. This statement was entirely in favor of the new method; and it was experimentally proved also by other authorities, that not only the vapor, but the chemical bodies which, by being atomized, are incorporated into it, reach not only the trachea, but the cells of the lungs.

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Some time after (in 1859), Matthieu constructed an apparatus which he called nephogine, and exhibited it before the Acadèmie de Mèdecine. But the greatest simplicity in the construction of the inhalation apparatus was attained by Dr. Bergson. He placed two glass tubes, with very fine openings at one end, at right angles to each other; the other end of one tube dips into a vessel filled with the fluid which is to be subdivided, while the other is fastened to a caoutchouc tubing, about a yard in length. At the middle of this tubing is attached a rubber ball, and the end extends into a ball also, so that the one in the middle represents an air reservoir, and that of the end a pair of bellows. If the latter is pressed by the hands of the patient, the air in the upper ball is compressed, escapes through the fine opening, and causes a vacuum in the other tube; the fluid of the vessel then ascends through aspiration, and is turned into fine mist when leaving the capillary opening.

Upon this principle, which is as excellent as it is simple, Siegle has based his inhalation apparatus; putting aside the bellows, which fatigued the hands of the patient very much, and substituting a vapor kettle, into which one of the tubes descended. The vaper issuing forth effects the same purpose as the bellows, and the patients inhale comfortably.

If we set aside the effect, praised by Demarquay, Leiblinger, and others, in conjunctivitis and keratitis, likewise the effect upon the ear, upon ulcers, etc., and only consider the effect upon the organs of respiration from the mouth and pharynx with its arches, the uvula, the glands through the larynx and trachea, with its ramifications to the lungs, we meet with a great number of diseases upon which the local therapy just spoken of exercises a great influence. But as the respiration is performed more or less powerfully and deeply, the atoms of the pulverized fluid reach the more or less distant organs of that function. From this fact it becomes self-evident that it will be necessary to respire feebly, if the influence should be directed upon parts situated in the mouth or pharynx; more powerfully and sometimes strenuously, if it should be our intention to act upon the larynx, trachea, or lungs. And further, as the lungs admit the

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greatest amount of air when the sitting position is assumed, it is manifest that we should place the patient in that position if we intend a deep penetration of the atomized cloud, whilst we should allow him to stand if we merely intend to act upon organs not so far distant. I do not intend to allude to such individuals as are excited and nervous at the aspect of every, even the most innocent instrument. Suffice it to say, that the inhalation apparatus do not enjoy an exception. But there are persons—happily not frequently met with—whose respiratory channels are so sensitive, even in a healthy state, that they cannot bear inhalations, either with pure water or any other fluid, at the first attempt, and several sittings are necessary to accustom them to the process. All cases of high sensitiveness which I have hitherto observed were patients with laryngeal diseases; whilst with others, and particularly with those suffering from diseases of the lungs, inhalations agreed very well.

The temperature of the atomized cloud, of course, varies in proportion to the distance from the spout of the apparatus, and must be regulated according to the nature of the special case. For some patients it is even necessary to have the fluid to be atomized warmed. When the apparatus is in order, and ready to act, the patient stands or sits, and inspires more or less powerfully and deeply, according to the requirement of the case.

It would exceed the limit allowed me were I to attempt to treat on all the diseases against which atomized fluids in general and especially inhalations, have been beneficially used. Demarquay has applied them in many cases, pharyngitis-granulosa, ulcera-syphilitica, laryngitis-chronica and syphilitica, phthisis, etc., and reports that cure or improvement has often been obtained in a few days. Other authors, Zdekauer, Fieber, Schnitzler, Gerhardt, Lewin, Waldenburg, McKenzie, Gibb, and others, report favorable success by inhalations in cases of whooping cough, asthma, inveterate bronchitis, aphonia, tuberculosis, gangrena pulmonum, pneumonia, bronchiectasis, emphysema, etc.

The number of the cures effected, as well as the time in which the cure took place, is far more favorable than in similar cases which were treated internally, and my own experience induces

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me to agree with that statement. The inhalations from a real specific in certain cases of hæmoptysis, in cough which is a result of eccentric irritation of the larynx or trachea, in hoarseness and aphonia as consequences of acute or chronic inflammation of the mucous membrane of the larnyx. The cure is sometimes effected with amazing rapidity, after many other medicaments have been applied without effect.

The following cut represents a steam apparatus, which, for convenience and usefulness, has not been surpassed:

Fig. 1.

Figure 1. *Steam Atomizing Apparatus.*—This consists of a boiler, in which steam is generated by flame of lamp J. J, Lamp, provided with tube for graduating flame for much or little heat. K, Safety valve, graduating to high or low pressure. By unscrewing the valve tube from its position, the boiler may be supplied with water without disturbing the atomizing tubes. L, Milled button or top. Between this and a suitable projection or shelf within the neck of the boiler is secured the packing of rubber through which the atomizing tube passes—air and steam tight. M, Mahogany ring to protect the hand from heat in removing the boiler and tubes for the purpose of changing the medicament. N, The atomizing tubes. O, Cup in which the medicament is placed. P, Shield for protecting the patient's face from unpleasant contact with the medicated vapors. Q, Joint allowing the shield to be moved to, and retained at, any necessary deviation from a horizontal position. R, Sliding staff for regulating the height of the shield. By means of the joint Q and the sliding staff, the shield may be adjusted for use by adults or by children.

This Steam Apparatus is constructed with the greatest care with reference to its convenience, durability, and complete immunity from danger of accident. The joints are both screwed and soldered, and every boiler is tested in the factory to

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a much greater pressure than any attainable by the use of the lamp. Its advantages over all the Air Apparatus are:

1st. That, being self-acting, it produces an even and continuous flow of spray without inconvenience or labor.

2d. The warmth of the spray produced by it is often an advantage.

Generally speaking, every chemical body which is soluble can be atomized, and therefore inhaled. The largest number of remedies contained in the Materia Medica can therefore be used. But it must be borne in mind that, besides the local effect, the medicaments are much more readily absorbed through the mucous membrane than they are by internal application—a fact which must be taken into consideration when the dose is to be decided on.

The following medicaments are those mostly recommended and found beneficial by practitioners engaged in treatment by inhalation.

1. In inhalatory treatment of the respiratory organs, nitrate of silver deservedly occupies the first place. Its dose is three to five or ten grains, in one ounce of distilled water. It is particularly serviceable in inflammatory conditions of the pharynx and the larynx. The strength of the solution, the frequency of the sitting, and the duration of the same, must be adapted to the nature of the particular case. It need scarcely be mentioned that proper care must be taken if strong solutions are inhaled.

2. Much milder in its effects is nitrate of alumina, which is prepared from a simple solution of the metal in nitric acid, working the crystals in distilled water repeatedly, condensing the solution by evaporation and recrystallizing. It rendered good service, not only in inflammation, but also in nervous affections of the larynx and trachea. The dose is three grains in an ounce of distilled water.

Very useful medicaments are the following:

3. Tannin—three grains to eight or ten grains in an ounce of water.

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4. Alum—four grains to ten or fifteen grains, ditto.

5. Solution of sesqui-chloride of iron—one minim to five or ten minims ditto.

6. Corrosive muriate of mercury—four grains to one or two ditto.

7. Acetate of lead—a grain and a half to eight grains ditto.

8. Sulphate of zinc—half a grain to five ditto.

9. Common salt—which has long been considered a most useful agent in the treatment of diseases of the respiratory organs. On the supposition that it was present in the atmosphere near the sea and saline springs, physicians have been in the habit of sending thither patients affected with chest diseases; and, to give the full benefit of it to those who were not able to travel, it had always been the object of physicians to create an artificial *sea air*. But it is only since the invention of the inhalation apparatus that this object could be fulfilled. The application of common salt for the purpose of inhalation is therefore very extensive, and produces very marked effects. We can make use of it in doses of from five to ten and twenty grains to an ounce of water; and one ounce is effective, particularly in diseases of the lungs and windpipe. In nervous affections, particularly of the larynx, and also the asthma, narcotics have been used especially.

10. Tincture of opium—one to ten minims in an ounce of water, and the preparations of opium.

11. The salts of iodine, bromine, chlorine, and some others. Authors report the good effects of arsenic, in the shape of Fowler's solution, and in a dose of half to five minims in an ounce of water. Lastly, besides the different mineral waters, there must be mentioned—

12. Pure or distilled water, cold or warm, or even as hot as the patient can bear it. It renders in many cases of inflammation and paralysis of parts of the larynx, good service.

We also present cuts of several hand Atomizing Apparatus for the local application of remedies to surfaces, inflamed or otherwise; also, for producing local anæsthesia, in such cases as

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extracting teeth, or in lancing tumors, felons or boils. They are also useful in throwing medicated spray into the larynx and throat, etc., etc.

Figure 2 represents an excellent hand instrument, first suggested by Dr. H. K. Oliver, of Boston, and is especially useful on account of the protection affodred to the face. A, An elastic bulb with valves, serving as a bellows to produce the spray within the jar. B, The Bergson Atomizing Tubes, the upright arm being formed in part by a rubber tube, which dips into the medicament placed in the bottom of the jar. C, Opening for the admission of air.

Fig. 2.

The advantages of Dr. Oliver's instrument over all other hand instruments consist in this:

1st. That the receptacle for the medicament and the shield for the protection of the face are united in one piece.

2d. That none but the finest of the particles of spray are inhaled.

3d. That the Bergson tubes, being within the jar, are protected from injury.

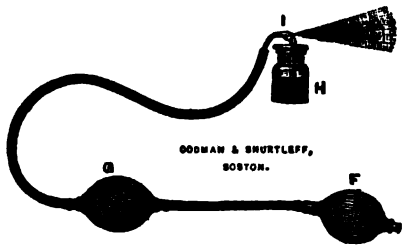

Fig. 3.

The Apparatus represented in *Fig.* 3 is essentially the same as that of Dr. Andrew Clarke, of England. It consists of the Elastic Bulb F, which, with its valves, serves to force air into the Elastic Chamber G, which, alternately expanding and contracting, supplies a steady stream of air to the Atomizing Tubes I, one branch of which dips into the vial containing the medicament. In addition to its other uses, this instrument constitutes a perfect Douche for bathing and making medicinal applications to burns, sensitive eyes, inflamed surfaces, painful sores, and for perfuming or disinfecting the sick room.

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The temperature of the fluids can, in all cases of local application, be such as is most agreeable to the part applied.

Figure 4. *Freezing Apparatus for Producing Local Anæsthesia.* This form of Apparatus—similar to that represented in *Fig.* 8, with exception of Atomizing Tubes, which are of metal—is all that is required for producing Local Anæsthesia by freezing with Ether, as employed by Dr. Richardson, of London, or with Rhigolene. This is especially useful to throw the spray on the larynx and in the throat.

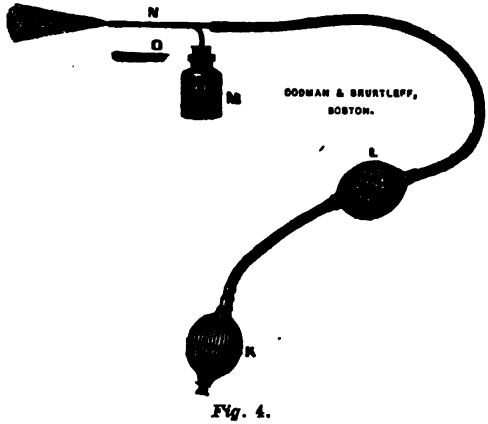

Fig. 4.

The Metallic Tubes which accompany this Apparatus are equally efficient for inhaling purposes, except for liquids liable to be vitiated by contact with metal, for which glass or silver, or silver and platinum tubes should be used.

Figures 5, 6 *and* 7 *are Silver Plated—Tubes adapted to Bulbs represented in Figures* 3 *and* 4.

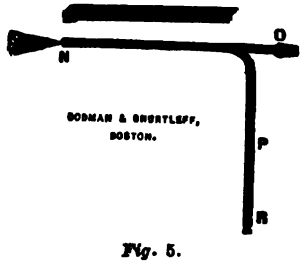

Fig. 5.

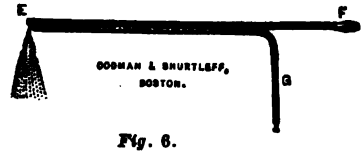

Fig. 6.

O and F (*Figs.* 5 and 6), conical end of air Tube for connecting with the rubber Tube of the Bulbs. R and G (*Figs.* 5 and 6), patent regulators for controlling the quantity and quality of the spray, and adds greatly to their value, as it enables the operator to secure such an amount of liquid as will freeze in the least possible time when the Tubes are used for

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Local Anæsthesia, and will afford the finest spray when used for inhalation. It is also very useful in preventing the passage of foreign substances into the Tubes.

Fig. 6 is also very convenient for throwing spray downward into the larynx, or, when inverted, upwards into the posterior nares. It is also well adapted to freezing.

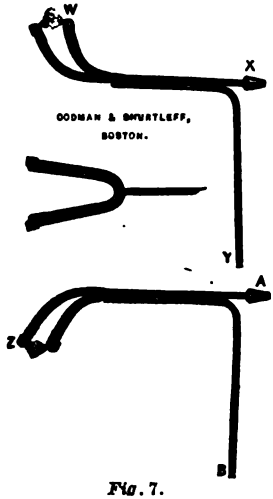

Fig. 7.

Fig. 7. *Dental Tubes.* W and Z, The bifurcated portion of the Tubes is designed to deliver spray on both sides of the gum at the same moment. X and A, Conical end of air Tube over which the rubber Tube of the bulbs is passed when used. Y and B, The patent regulator to control amount of liquid.

These Tubes are for use for Teeth Extraction, for painless removal of Dental Pulp, and other operations in Dental Surgery. With the Bulbs (represented in *Figs.* 3 and 4), they form the most desirable Apparatus yet devised for these uses.

A NEW MODE OF TREATING DISEASES OF THE CAVITY OF THE NOSE.

We also present the following cut of a Nasal Douche, together with extracts from an able article by Dr. J. L. W. Thudichum, of London, on its use, as published in the *London Lancet*:

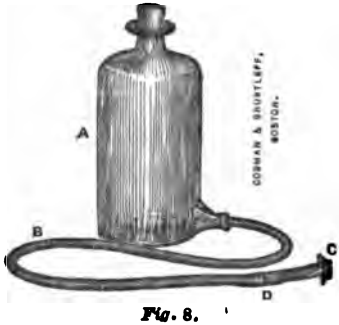

Fig. 8.

Fig. 8. *Nasal Douche,* or Apparatus for treating diseases of the Nasal Cavity, by the method of Professor Thudichum. A, Reservoir; B, Leading Tube; C, Nozzle, fitting the nostril in such a manner that liquid cannot pass outward, or air into the nostril. D, Joint formed by inserting a short glass Tube within the rubber

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tubing, at which Nozzles of different sizes, or for different patients, may be connected without loss of time.

Dr. Thudichum says: The treatment of diseases of the cavity of the nose has hitherto been attended with very great difficulties, owing to the circumstance that the cavity is large, complicated by many sinuosities, interrupted by many thin bony and membranous projections, and therefore little accessible, and for the most part not accessible at all, to instruments by which growths might be removed, or topical remedies applied. The removal of excrescences from the lower and median nasal canal was yet the most successful of surgical operations, although it was frequently left incomplete, or remained unavailin, owing to the speedy return of the polypi. But the topical application of remedies for the treatment of acute and chronic affections of the nasal cavity, which is certainly the principal therapeutic requirement, and in many cases prevents the formation of polypi, could only be attempted by mechanical contrivances, which were so objectionable to the patients that, after longer or shorter trials, they had to be abandoned. I have had under my own care several important cases of affection of the nasal cavity, in which the mere possibility of cleansing the cavity of the nose would have been a great boon to the patients; others, in which I have no doubt the application of remedies, such as we are in the habit of using in conjunctivitis, would have effected a speedy recovery from painful and troublesome conditions. The only mode of cleansing the cavity of the nose which was then known in medical science, was by injections with a syringe; but, owing to the velocity with which the injected fluid touched the walls of the nose, this process always created much irritation, pain, sternutation and lachrymation, and the patients mostly opposed the entrance of the fluid by expiratory efforts, which, indeed, were the only means they had of preventing the fluids from running down the choanæ and reaching the larynx. The mere effect of pure water upon the Schneiderian membrane being highly irritating, two causes combined to defeat the object of injections of water; and when medicines which might be supposed to have a beneficial effect upon the diseased Schneiderian

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were dissolved in the water, they, although perhaps better tolerated than pure water, could not be kept sufficiently long in contact with the affected parts to exercise upon them even such slight medicinal action as their necessarily diluted state permitted. There was a third application that could be made—namely, the introduction of medicines in the form of fatty or mucilaginous ointments. In one case in which I endeavored to benefit a chronic ozæna—a residue of scarlet fever—by topical application, a solution of sulphate of zinc in intimate mixture with lard had a most decided effect, the patient being much improved, though not cured. But this application of ointment to the surface of the lower canal of the nose, and to a part of the median canal (which are the only portions that, as a rule, can be reached, even by clever manipulation), is the most objectionable of any, so far as its accompaniments of irritation and pain are concerned, sternutation and lachrymation being not rarely long continued after it, and the peculiar pain producing a reluctance on the part of the patient, which it is difficult to overcome in young and old people. All these applications, then, were partial, imperfect, irritating, and consequently unavailing to effect the desired end. Many cases of superficial ulceration ended in caries, embittering the life of the patients, and through the odor making intercourse impossible and family relations troublesome; other cases of chronic inflammation ended in deformity of the external nose and the formation of polypi in its cavity, and produced a constant false resonance of the voice; a number lasted throughout a life-time, the nose being a constantly weak part, and capable of prostrating the patient at any opportunity which dust and wind might afford; others had consequences even more severe, and the specific ulcerations of the cavity of the nose only too frequently terminated in that sinking of its bridge, which is the most painful proclamation of disease with which a patient can become afflicted. Then there were the convulsive affections produced by local irritation in the nose—those cases of fabulous sneezing in which hardly any remedy availed, even in diminishing the number of spasms in time, because the centre and seat of the irritation could not be

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reached by medical agencies. Truly dangerous were some cases of bleeding from the nose, in which the broken blood vessel could not be reached by either styptics or mechanical compression, and could not be made to contract by contact with that most powerful of hæmostatic agents, ice or ice-cold water. Not a few cases of this kind terminated fatally, or required the most desperate measures to prevent the fatal end, such as plugging of the nose and choanæ with sponges or tinder; and these not rarely left a condition of anæmia in which other accidental diseases could put a stop to life with comparative ease, or which continued without the supervention of other diseases, enfeebling and considerably shortening the rest of the life of such patients.

All these difficulties, and many more which might be mentioned, are removed at one stroke by the discovery of Professor Weber, of Halle: that when one side of the nasal cavity is entirely filled through one nostril with fluid by hydrostatic pressure, while the patient is breathing through the mouth, the soft palate completely closes the choanæ, and does not permit any fluid to pass into the pharynx (a physiological fact thus far already discovered by E. H. Weber, of Leipzig, before 1847, and published in Muller's Archiv, 1847, pp. 351–354): while the fluid easily passes into the other cavity, mostly round and over the posterior edge of the septum narium, in some persons also through the frontal sinuses, and escapes from the other open nostril, after having touched every part of the first half of the cavity of the nose, and a great part, certainly the lower and median canal, of the second half. By means of the application of this principal to the treatment of diseases of the nose, it is possible easily and frequently to wash the nasal cavity, to disinfect and deodorize it, to remove the sordes which accumulate so easily in it, and to apply to its surface a great number of beneficial medicinal substances, so as to prevent acute affections from extending, and to incline them towards a speedy recovery: to stop hæmorrhages, allay irritations, and subdue in a remarkable manner chronic affections of the Schneiderian membrane, so as to re-establish a perfectly healthy surface and normal condition of the organ of smell.

Of the fluids to be employed for rinsing the nose.—Pure warm water, when introduced into the nose by means of the appara

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tus, causes, in most persons, a very disagreeable sensation, ending in lachrymation and sternutation (or tears and sneezing), with subsequent copious discharge of watery mucous from the nose. If the quantity of water run through the nose be large, the "cold" produced thereby, including the change in the sound of the voice, may last for some hours. To avoid this objectionable symptom, it is best to employ solutions of common salt, or other salts, of sugar or milk, for rinsing the nose. In the course of practice, cases will arise in which all these solutions offer advantages. For general use, a solution containing one ounce of common salt in a pint of water is satisfactory. Some persons will bear less salt; others will tolerate more. Of this solution, having a temperature rather lower than that of the blood, from one to four, or if desired, any number of pints, may be allowed to flow through the cavities of the nose. It does not easily produce sneezing, rarely lachrymation, and hardly ever any subsequent symptom of cold in the head. The saline solutions which, next to common salt, offer the greatest advantages, are those of the common phosphate of soda, and phosphate of ammonia and soda. They can be used by themselves, or mixed with the common salt. Their alkalinity has a beneficial effect upon the irritated Schneiderian membrane, and dissolves or loosens any deposits of mucous or pus, which so frequently dry and harden upon the surfaces of the nasal cavity.

Of the fluids to be employed for deodorizing the nasal cavity.—For this purpose I have employed dilute solutions of permanganate of potash. This agent had done me such excellent service in removing the fetor of the mouth in cases of typhoid fever, that I was induced to apply it for the removal of the fetor of ozæna, and with the most striking and immediate success. A solution of from one grain to ten grains in a pint of water is a good proportion, according to the severity of the case. The solution tastes alkaline, and acts as a feeble escharotic upon healthy and particularly upon vascular and erythematous parts. When the margin of the nostrils is excoriated, the permanganate colors the excoriated part brownish; but the effect of this is rather beneficial than otherwise, as the excoriated and colored part dries easily, and after the shedding of the faint brownish pellicle, appears healthy.

Mode of applying these and other fluids to the nose by means of the apparatus.—The fluid, of the proper composition and temperature, is filled into the glass vessel. All air in the india-rubber tube is now replaced by fluid, the escape of the air upwards being facilitated by gentle manipulation. The glass vessel is raised and fixed in the position which will give the desired pressure. A little fluid is now allowed to escape from the nozzle, to make sure that all air is expelled. The patient (or healthy person, if it is only desired to show the physiological

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experiment) is seated in front of a basin, with his head and face slightly bent over it, the apparatus standing by his side. He is told to breathe through his mouth exclusively, and to abstain from swallowing. The nozzle, previously selected as of proper size, and connected with the apparatus, is now inserted into one of the nostrils, and held there by the patient's hand of the same side. The little stop-cock (or tube) is now opened, and after a few seconds a continuous and rapid stream of fluid is seen to flow from the opposite nostril into the basin below. Persons who have control over themselves will always bear the experiment as here described; but young persons, nervous females, and children, become confused, begin to cry, or to swallow and breathe through the nose. In such cases the level of the fluid in the glass should be very little above the level of the introitus into the external ear, so that the fluid runs very slowly, or only drops out of the free nostril. The hand of the operator should be upon the india-rubber tube, to close it by compression the moment he sees bubbles come through the nostril, or perceives that the patient swallows or becomes confused. It is always well to let the fluid pass at first under slight pressure, in order to allow sordes within the nose to be loosened and crusts of dried matter to be softened. When this has been effected, it is useful suddenly to raise the glass vessel and produce a rapid stream, which will then scour the impurities away. In some cases I have done this repeatedly with success. The loosening of crusts and lumps of inspissated mucous is always attended with some irritation, and also with retardation and diminution of the current of fluid. The sudden increase of the pressure is the surest means of causing the least inconvenience to the patient, and effecting in the quickest manner the purpose of the operator. It is also well to reverse the current now and then, as sordes are much better detached in that manner. If only one nostril is diseased, or the principal seat of the disease, I allow the fluid to enter by the opposite side, and to leave by the affected nostril. I then change the current, and filling the affected nostril, allow the current to leave by the healthy one. Thus, half a dozen or a dozen changes may be usefully instituted. It is really surprising what an amount of sordes will sometimes be removed from the nose by the rinsing process. Any one who has seen it once will easily conceive the manner in which, by means of these constant accumulations, nasal diseases become chronic, incurable, and lead to fearful suffering and death. When water has been allowed to run through the nose, it takes two minutes and a half before the sense of smell returns in its integrity. When saline solutions have been used, it takes about a minute and a half; but after the alkaline solutions a minute suffices to allow the perception of odors to be clearer than before the application. If the special excitant of the olfactory, as the

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perfumers term it, the neutralizer and stirrer up of smell, ammonia, is applied immediately, even less time than a minute will be sufficient.

There are cases of chronic coryza, with some blenorrhagia, in which the affection of the Schneiderian membrane prevents patients from satisfactorily performing their business, which requires a full command of the organ of smell. Chemists, perfumers, wine merchants, provision merchants, and others, may belong to this category. In cases of this kind the topical treatment is beneficial. After the application of alkaline solvents in particular, the sense of smell is clearer.

I hope that the advance which we are making in the treatment of diseases of the nose may be shared by its physiology. There is no greater enjoyment of Nature's triumphs, and no greater safeguard against noxious things of all kinds, than a healthy nose.

Of the medicinal solutions which may be applied to the cavity of the nose.—Although the solutions before enumerated act in a measure as alteratives, resolvents, and escharotics, and, therefore, rarely constitute a sufficient medical application by themselves, yet they are more frequently used for preparing the nose for the application of more energetic and specifically acting solutions. To this latter class belong the solutions of alum, sulphate of zinc, and sulphate of copper—the best astringents; the solutions of nitrate of silver and bichloride of mercury—the most suitable alteratives; and the solutions of chloride of calcium, in which suboxide or oxide of mercury is suspended in a finely subdivided state, together with the bichloride solutions—the best specifics. Of stimulating solutions, a mixture of eau de Cologne with water or salt water, is sometimes useful.

The probable concentration of these solutions can be surmised from the circumstance that the sensibility of the healthy nasal cavity stands about midway between that of the eye and the mouth. When the nasal cavity is completely filled with fluid, the specific sense of smell cannot any longer be exercised; even the solution of eau de Cologne is not perceived to be such when it once fills the nose. The sense of smell being thus entirely obliterated by the fluid contained in the nose, the reflex effects which substances may exercise by means of this sense are entirely absent; and the only impingement which the fluids can produce is upon the filaments of sensitive nerves coming from the fifth pair. It is owing partly to this circumstance that comparatively strong medicinal solutions are borne by the nasal cavity without great secretion. Another circumstance favoring the application of stronger solutions is the ready manner in which the healthy surface of the nose defends itself against irritating, chemically-impinging substances, by means of a copious flow of mucous. Excoriated or ulcerated parts lack this

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power of rapid secretion; and hence they are affected by medicinal solutions much more than the healthy parts of the surface of the nasal cavity. What is here stated is the general result of experience and experiment; but, at the same time, I must insist that the application of medicinal solutions in each case should be begun with the greatest caution, as individuals differ greatly in point of irritability of the nasal cavity. In the beginning, therefore, very dilute solutions of medicinal substances should be used, and their strength be increased gradually, after their effect has been well exhausted, by the use of greater quantities applied by a quick flow, or the use of smaller quantities in a slow current distributed over a longer time of contact.

Solution of alum.—Half an ounce of roughly-powdered crystallized alum is dissolved in a small quantity of hot water, and the solution made up to one quart by means of cold and tepid water in such a manner as to ensure that the temperature of the solution should be below, but near to, blood-heat. In superficial ulceration or blenorrhagic conditions this solution is well borne. Ulcerated parts, which before its application were red, mostly appear as white patches after its application, thus showing that the effect of the alum on the ulcerated surface has been considerable. When I was desirous to manage with smaller quantities of solutions, I have sometimes mixed a little permanganate solution with that of alum.

Solution of sulphate of zinc.—From a scruple to a drachm of the sulphate of zinc, dissolved in a quart of warm water, together with half an ounce or an ounce of sulphate of soda or sulphate of magnesia, gives a suitable fluid.

Solution of sulphate of copper.—Of this sulphate also from a scruple to a drachm, mixed with half an ounce or an ounce of soda sulphate or magnesia sulphate, can be dissolved in a quart of warm water.

Solution of acetate of lead.—Of this crystallized acetate from a drachm to two drachms, together with half an ounce or an ounce of crystallized acetate of soda, may be dissolved in the quart of warm water.

Solution of nitrate of silver.—Of this salt not more than from half a grain to a grain should be dissolved in each ounce of water. A quart of water, therefore, in which previously from half an ounce to an ounce of nitrate of soda has been dissolved, may receive from sixteen to thirty-two grains of the nitrate. In particular cases the solution may be made stronger. The nitrate of potash is not so good as the nitrate of soda, because it has slightly irritating qualities. When it is necessary to use it in an emergency, when soda nitrate can not be had, the solution should be more diluted.

Solution of bichloride of mercury.—The greatest caution is necessary in the use of this agent, as it has a tendency to pro-

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duce excoriation on healthy surfaces. The first solution to be employed should be one containing five grains of corrosive sublimate in a quart of water, in which an ounce of common salt is also dissolved.

Solution of chloride of calcium with suspended oxide or suboxide of mercury.—These fluids are the common phagedænic waters, or black and yellow wash, to which common salt has been added. Two drachms of calomel, twelve fluid ounces of lime-water, one ounce of common salt, and twenty ounces of warm water, yield the black solution. One scruple of corrosive sublimate, one ounce of common salt, twelve fluid ounces of lime-water, and twenty fluid ounces of common warm water, yield the yellow wash. These mixtures must be well agitated in the glass vessel while being allowed to run through the nasal cavity.

Sedative solutions.—Of prussic acid forty minims to the quart of warm salt water, of tincture of opium two drachms, may be taken. These drugs may be added to some of the above solutions of metallic salts. But if this is desired, it is better to substitute a solution of morphia for tincture of opium. The prussic acid is incompatible with the copper, silver and precipitated mercury solutions; it goes conveniently with the alum and common salt solutions.

Styptic or hæmostatic solutions.—Amongst these, ice-cold salt water, containing an ounce of salt to a pint of ice-water, takes the first place. When this, after having been continued for a considerable time, is insufficient to stop the hemorrhage, a fluid ounce of the tincture of the sesquichloride of iron may be added to each pint of ice-cold salt water.

Stimulating solutions.—One ounce of eau de Cologne upon ten ounces of salt water, is a useful stimulant. Strong spirit of wine may be taken in place of the eau de Cologne.

I have now fully, and for some readers, perhaps, somewhat too explicitly, described a number of medicinal solutions which may with advantage be applied to the treatment of nasal diseases by the method in question. I was desirous to impress upon the memory of the reader the fact that I recommend only such solutions as are brought up to a certain specific gravity by salts which do not decompose the medicinal agents. There may be cases in which it is desirable to swell the Schneiderian membrane by watery fluid and produce endosmosis, and others in which highly concentrated solutions may beneficially be used to effect exosmosis and shrivel Schneider's membrane. These adaptations, and the various accommodations of the fluids and their degrees of concentration, I must leave to the skill and ingenuity of those who make use of this method. They will also probably multiply the resources of the rhinotherapeutic pharmacy, and thereby add to the success and certainty of this interesting method of treatment.

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THE MEDICAL REPORTER.

ST. LOUIS, FEBRUARY 1, 1868.

BIBLIOGRAPHICAL NOTICES.

MECHANICAL THERAPEUTICS. A PRACTICAL TREATISE ON SURGICAL APPARATUS, APPLIANCES AND ELEMENTARY OPERATIONS, EMBRACING BANDAGING, MINOR SURGERY, ORTHOPRAXY AND THE TREATMENT OF FRACTURES AND DISLOCATIONS. By PHILIP S. WALES, M. D., Surgeon U. S. N.; with 642 Illustrations. Philadelphia: Henry C. Lea. 1867.

The title of the above work is sufficiently indicative of its contents. We have not seen for a long time (in the English language) a treatise equal to this in extent, nor one which is better adapted to the wants of the student and general practitioner. It is not to the surgeon alone that this book belongs; the physician has frequent opportunities to fill an emergency by such knowledge as is here given; he may not be the expert operator, for his experience is not sufficiently extensive, but what he does is well done, often enough to the great temporary relief of the patient, till the surgeon himself can attend. We do not know but what we draw too great a distinction between the physician and surgeon in reference to these comparatively minor matters. It is easy enough to keep up in general practice the earlier familiarity with minor surgery, and as a duty to our patients this knowledge becomes necessary. This work is complete in itself; the numerous and excellent illustrations, however insignificant some of the objects may seem to be, the author has, with great good judgment, thrown broad-cast through the text; such illustrations are an economy of labor and time, particularly to the student. The publisher has issued the work in substantial binding; the typographical execution is admirable. Every practitioner should make purchase of such a book; it will last him his life time.

It may be obtained at Keith & Woods', Fifth and Olive streets.

A PRACTICAL TREATISE ON SHOCK AFTER SURGICAL OPERATIONS AND INJURIES, WITH ESPECIAL REFERENCE TO SHOCK PRODUCED BY RAILWAY ACCIDENTS. By EDWIN MORRIS, M. D., F. R. C. S. Philadelphia: J. B. Lippincott & Co. 1868.

This is a very readable work of eighty-eight pages, on the subject of Shock, more particularly as it refers to this result from accidents on railroads. Of course, the term "Shock" is a mere

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every day expression for a number of symptoms, for which, without describing them, we have no better word, and in this manner the author uses it. The symptoms, diagnosis, prognosis and treatment of shock are such as we might expect from the description of the phenomena; no more, no less, than what every medical man, surgeon or physician, has seen in his practice; further than this, the book has interest only in so much as it refers to shock from railway injuries, which the author very properly says is a misnomer; for why a blow or a bruise in a railway carriage should produce a different kind of shock from that of a bludgeon or an amputation, it is difficult to understand. The only prominence that should be given to this part of the subject is, the imposition that is daily practiced on railway companies by designing persons, who very readily make up a case of spinal injury, on which they are sufficiently posted to deceive oftentimes the most wary. The thought occurs on perusing this book, how frequently the deaths attributed to anæsthetic agents may be explained by this cause, shock, either from mental emotion, or the too rapid administration of the chloroform, the medicine most often used. We commend the work for general perusal, if only for the number of interesting cases, which go for its illustration.

For sale by Keith & Woods.

THE TREATMENT OF DISEASES OF THE THROAT AND LUNGS BY INHALATIONS, WITH A NEW INHALING APPARATUS. By EMIL SIEGLE, M. D. Translated from the Second German Edition by S. NICKLES. M. D. Cincinnati: R. W. Carroll & Co., Publishers. 1868.

Dr. Nickles has given a very excellent translation of the above work, and he deserves the thanks of the profession for affording the opportunity of reading almost directly the thoughts of Dr. Siegle upon the subject of inhalations. We enter into the enthusiasm of the author on his subject, for we have met with very happy results in this topical application of remedies to localities where before we had the uncertain effects of medicines given by the stomach. Dr. Siegle's apparatus, if not with all its improvements, at least sufficiently perfected for daily use, we have used for some length of time, without having even given credit to him for the invention; but now, after reading his essay,

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we are glad to be able to accord to him a high degree of merit, as well for the apparatus as the extent to which he has gone in his treatment of the diseases of the throat and lungs. We are happy to find in him a sufficient caution, which prevents him from thinking too highly of this remedy, or claiming for it more than is allowed—thus, he says in his remarks on tuberculosis of the lungs, that this new therapeutical measure is not a specific, nor can this affection be cured by local treatment. We wish that the translator had introduced illustrations of the author's apparatus in the text of the book, and not left them to the advertising columns of the manufacturer; this would have given more satisfaction to the reader. Altogether, however, the book is well worth the study and the possession of every physician.

It may be purchased at a reasonable price at the book store of Peter Smith, Fourth street and Franklin avenue.

CLINICAL LECTURES ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By JOHN HUGHES BENNETT, M. D., F. R. S. E. Fifth American, from the Fourth London Edition, with 537 Illustrations. New York: William Wood & Co. 1867.

We are under obligations to William Wood & Co. for renewed kindness, in favoring us with such a work as Bennett's Clinical Lectures. The work is so well known and so highly appreciated by the profession, that any review would be but once more endorsing its high character, and repeating what is generally considered, that it stands at the head of similar productions. It is issued in the usual substantial and handsome form which the publishers aspire to in all their publications.

It may be obtained at the book store of Keith & Woods.

Medical Legislation.—There has been considerable agitation on the subject of medical legislation and legal protection to both people and physicians, but as yet we have seen no active steps taken in that direction. We have never felt favorable to special legislation on professional subjects, as a general rule, the more especially when such legislation is intended to be proscriptive in

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its nature or intent. Still some standard should be required in every profession, to entitle an individual to recognizance and membership, and in most every calling, except medicine, such a standard is established, while any person can call himself Doctor, take out the United States license certificate, and launch himself on the public as a physician, and if he get patients treat them as he may think best, and there is no legal enactment to prevent.

Legislative bodies have, in the various States, duly chartered, and by law established, Medical colleges, and empowered their professors to teach medicine, and under certain restrictions graduate students as Medical Doctors, giving them a diploma or certificate as evidence of the ability to successfully practice medicine. It is presumed that the professors of these colleges are men able to teach their respective branches; and it is further presumable that they do their duty, and not only teach the students their profession well, but that they will grant diplomas only to those qualified to receive them. Now, as we have laws that fully define the manner and character of qualification necessary to become a Medical Doctor, should we not have an additional law requiring all who propose to practice medicine to come up to this standard, and as a requisite to practice their profession possess a diploma from some legally chartered medical school. This kind of a law would cut off none but quacks and charlatans, and would offer some guarantee and protection to the public of the proficiency of those to whom they entrust their lives. It may be said that many who graduate are still unqualified, if so this is the fault of their teachers; also, that teachers or professors will not examine with enough rigor, or show favoritism, and thus pass many who are not fully prepared for graduation. Again, we say if such be the case, such professors are unfitted for their position as such, and should be replaced by better men. The regulating of these things will naturally fall to the lot of the profession to correct, and to displace incompetent teachers, and require a higher standard of medical education previous to graduating; and this movement has, we are glad to say, already been commenced, and will, we

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are sure, result in an improvement of our schools and the method of teaching. Again, a law of this kind would not conflict with any of the various systems of medicine; all who by law are empowered to teach and graduate students would stand on an equal footing, leaving the people to judge, by their success and practice, which to employ. We say, then, let the medical profession ask of our legislative bodies to pass a law establishing a standard, to be attained previous to being permitted to practice medicine, and that standard to be a diploma from some legally constituted medical school. We would also ask an additional law to protect the public, which is to require all manufacturers of nostrums and so-called patent medicines to put in plain language the exact composition of their preparation on each bottle or package, and how much of each of the ingredients is contained in the dose prescribed. Thus, while we would not forbid or prevent their manufacturing such medicines, we would let the public know just what they are taking, as does the physician when he writes his prescriptions, which is at all times on file as an evidence against him in case of ignorance or negligent practice. Let us, then, as members of the medical profession, unite our energies to secure this protection, which, while it would not proscribe any honest or intelligent practitioner, would do very much towards elevating the general character and standard of medical men, and at the same time offer some guarantee to the public of the proficiency of those whom they look to in the greatest need. We have in fact been induced to offer these suggestions at the earnest solicitations of a gentleman, who, in the position of a Catholic priest, has had ample opportunities of seeing the evils of irresponsible and ignorant pretenders in medicine, and to see the necessity of some restrictions to such indiscriminate assumption by so-called doctors and charlatans. The same remark would apply to the midwives, who sacrifice so many lives from their deplorable ignorance of the profession they have so easily adopted; let them, "if we must have them," be required to possess some knowledge of their art previous to being permitted to practice as such. The law as regards so-called patent medicines we have

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long thought a necessity, to relieve the public from what is getting to be a monstrous evil, greater, far greater than is realized by those not conversant with such things, for they are multiplying in such an enormous degree, and are so generally used, that, as all practitioners know, they cause great injury of the public health, and while, as we said before, we would not wish to forbid their manufacture or use, let the people know just what they are taking, and then do as they please.

Sore Nipples.—The following application to sore nipples we find highly recommended by M. Caffe in a late number of *L'Evenement Medical.* We all are familiar with this trouble, and know how intolerable is the suffering to the nursing woman, and how numerous are the remedies. This application has the threefold quality of giving prompt relief without injury to the mother and the child:

R

Olei Theobromœ.....3 ijss.

Extracti Krameriœ.....grs. xv.

Misce. Aromatize *ad libitum.*

Three or four applications of this pommade will suffice for the cure, ordinarily in twenty-four hours.

Codeman & Shurtliff, Boston.—We can, from personal use, recommend the instruments made by the above manufacturers as of the very best quality. Those for atomizing fluids, &c., illustrated in the present number, they manufacture in a very superior manner, and orders sent them by mail will receive prompt attention. For prices, &c., see their advertisement.

Erratum.—In Table No. 3, page 710, in the fifth column, 100 should be 1000, and should read "Number of deaths per 1000 inhabitants from reported Epidemic Cholera.

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THE SAINT LOUIS
MEDICAL REPORTER,
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EDITED BY
J. S. B. ALLEYNE, M. D., AND O. F. POTTER, M. D.

VOL. II. ST. LOUIS, FEBRUARY 15, 1868. No. 24.

ON TYPHOID FEVER.

By Drs. CHESNEY and BROCK, New Market, Mo.

[Communicated for the St. Louis Medical Reporter.]

We wish to offer a few thoughts in regard to some points in the "Symptoms, Pathology, Diagnosis and Treatment of Typhoid Fever," which we think are very imperfectly understood by many practitioners; and which we apprehend often lead to fatal errors in practice.

The symptom of "Muttering Delirium," common in the latter period of Typhoid Fever, is by many thought to depend upon encephalic inflammation, and is treated accordingly, if we may judge by what we see in the periodical literature of the day. To prove that this symptom *does not* depend for its origin on inflammation of the brain, and that treatment based upon such a supposition is irrational, we may be permitted to make some short extracts from the "authors" in support of our opinions. Bartlett, in speaking of this matter, says: "From the frequency and severity of the symptoms, consisting in deranged action of the brain, it would have been supposed, as a matter of a *priori* reasoning, that this organ would have exhibited corresponding alterations in its appearances; such is, however, not the fact. There is no ascertained relation between the cerebral symptoms during life, and the pathological condition of the brain and its membranes appreciable after death. Delirium and somnolence are

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found to have occurred as frequently, and to have been as strongly marked in patients whose brains presented no change after death, as in those of an opposite character."

Bell and Stokes say: "As regards lesions of the nervous system, we should suppose them to be very frequent, were we to infer the fact from the frequency of disorders of the senses, and of the mental faculties in Typhoid Fever; but certainly observation does not justify such a conclusion. Lesions of the nervous centres are rare, and of small moment when they do occur."

Flint says: "Delirium, however prominent as a symptom, is no evidence of encephalic inflammation; the appearances of meningitis are not found after death in cases characterized by very active delirium; nor is there any abnormal amount of congestion."

Now we see that it is not inflammation with which we have to deal in treating this symptom, but a condition which is very well expressed in the term, "unbridled" state of the nervous system—a condition in which a pathological nervous activity obtains—an activity of this system disproportionate to the vital manifestations of the other bodily functions, and which, by this morbid exaltation of function, tends directly to its own destruction and that of the body with it.

Now as to the treatment of the patient for the relief of this condition, we will again have recourse to authorities. First, we may mention Louis himself, than whom there is no greater authority upon any subject connected with Typhoid Fever. He discarded local and general antiphlogistics *in toto* in prescribing for this symptom. Wood says: "Opium is an admirable remedy in this fever—useful in its latter stages by its stimulating power; relieving nervous disorders, and inducing sleep." Watson says: "It is when there is delirium, restlessness, wakefulness and spasm; and when the disturbance of the nervous system outruns the vascular system, that opium is so beneficial." Flint says: "Delirium, if prominent as a symptom, is to be treated with opium and other anodynes." We might multiply authority indefinitely upon this point, but the above will suffice.

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A moment's reflection should remind us that it is not *arterial sedatives*, such as venesection, carbonic acid gas and veratrum viride, which we should bring into requisition in treating these cases, but *nervous sedatives*, and those of a kind that, while they produce nervous tranquility, will at the same time stimulate to increased activity and power the other organic functions. We have this remedy almost to perfection in opium. For it to meet the desired end, however, it must be given in full doses; as when it is administered in small and repeated doses it acts as a stimulant only. Dunglison says of opium in the delirium of which we speak: It "should obviously be given in such quantities that its sedative impression may be fully exerted, otherwise exaltation of the vital manifestations might be carried yet further." Chambers gave 3 grs. of opium every three hours in a case of delirium attending acute pericarditis; and we have ourselves given a like quantity to a small and delicate girl of thirteen, afflicted with acute articular rheumatism, accompanied with delirium. We speak of these facts only from the conviction that a large number of physicians are averse to using opium under any circumstances when brain symptoms are present. To be a safe remedy we must of course discriminate carefully in our cases.

As to the diagnosis of Typhoid Fever, we are informed by the books that it is usually very easy; in most cases we have no doubt it is; but that the periodical fevers are often mistaken for it, and treated accordingly, especially among Western physicians, we do not in the least doubt. Our reasons for this belief are simply these: We often hear it stated among physicians with whom we are acquainted, (and, by the way, they are a good many,) and see it stated in the "journals," that large numbers of cases of Typhoid Fever have been treated by them in the last year or last five years. This may all be true; but the following facts are true: We have been engaged in a tolerably extensive country practice for ten years, and during that time we do not recollect to have met with more than two or three unequivocal cases of Typhoid Fever, although we are located in a vicinity, the topography of which might lead a casual observer to suppose

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that Typhoid Fever would occur pretty often. Miasmatic fever is quite prevalent, and to our great pain and sorrow, we remember to have met with a case of this kind in our early professional career which we treated for Typhoid Fever, and the life of our patient was the wages of our stupidity! Such errors we are sure are quite common. We are acquainted with a medical gentleman, who stands well as a practitioner among the community in which he labors, whose five in every ten patients have *the* Typhoid Fever, and that without regard to age, condition, locality or season! Alas! for humanity, we fear he is not alone!

NATURE AND TREATMENT OF EPIDEMIC CHOLERA, ACCORDING TO THE METHOD OF DR. DELFEAU.

By Dr. J. LeCarpentier.

[Communicated for the St. Louis Medical Reporter.]

It is, in a great measure, our ignorance of the causes of disease that renders so uncertain our daily efforts in curing them.

Dr. Delfeau, a medical man of Colliowre, France, convinced of such a truth, devoted the most part of his time for several years in studies for the discovery of the cause producing Epidemic Cholera, and I propose to give in as concise a manner as possible an account of his observations and researches, as communicated to me a short time ago.

The cause of Epidemic Cholera, says the Doctor, is a poisonous fluid, the product of a double fermentation, *putrid* and *malarial*, which finds its way into the system, mostly through the organs of respiration.

The action of that deleterious principle is first directed upon the blood, which, under its influence, enters into a state of fermentation. Every following morbid condition in the course of the affection is due to that primitive alteration of blood.

The immediate effects of intoxication of blood are:

1. To deprive the red corpuscles of the blood of their physiological power of absorbing oxygen.

2. To diminish the normal vitality of the walls of the vessels, arteries, veins and lymphatic vessels.

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3. To give the globulin its full power of coagulating blood.

Under the influence of globulin, and deprived of oxygen, the red globules are separated from the serum into blackish lumps or clots of more or less density; then the serum itself transudes through the different tissues, (sweat, diarrhœa, etc.,) carrying away all the saline elements of the blood, and more particularly the chloride of sodium.

From the facts above mentioned, says Dr. Delfeau, we can easily deduce the following indications:

1. Neutralize the morbid action of the cause upon the blood.

2. Excite the normal vitality of the vascular walls, and at the same time restore the blood with its saline elements.

Beside these we can find a few more indications, but they are accessory, and of secondary importance.

Now then, our knowledge in therapeutics will enable us to comply thoroughly with the above indications, for, finding apart the two causes, putrid and malarial, we could fight them victoriously, and if so, we cannot be powerless while we find those causes united in producing a peculiar morbific agent.

1. To the putrid element we can oppose chlorine.

2. Against the malarial cause we can use Peruvian bark.

3. And lastly, the common salt will serve us in restoring the blood with its most important saline element.

Then chlorine and its preparations, Peruvian bark, common salt, are the rational remedies to be used against Epidemic Cholera, and the only condition of success, says Dr. Delfeau, consists in administering them, always simultaneously.

When summoned in any case of cholera, the Doctor adopts the following measures:

If any indications exist of doing so, he prescribes an emetic dose of *ipecacuanha*, or a cathartic one of *sulphate of magnesia*.

Against epigastric pains, according to the case, simple *mustard plaster*.

To check vomitings, effervescing draughts and ice.

Against diarrhœa, enemata, containing *decoction of galls* or *extract of rhatany*.

Against cold, aromatic drinks, warm tea, with addition of any

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diffusible stimulant, as *brandy, Jamaica rum, ether or chloroform.*

Against thirst, cold water at will, and ice.

The rational treatment, so successful at the hands of Dr. Delfeau, consists in the daily use of the following prescriptions:

R

1. Solut. Chlorinii.....3ss.
   Aquæ.....℥iiij.

Misce.—A tablespoonful every hour in a little simple syrup.

2. At the same time, twice a day—

R

Sodii Chloridi.....3v.
Aquæ.....℥iiij.
Sacchari Alb.....q.s.

Misce.—One-half immediately, other half two hours after.

This last mixture must be taken for several weeks, progressively diminishing the doses according to the state of the patient.

R

3. Cort. Cinchonæ Flavæ.
   Cort. Aurant. Amar.....aa. ℥ij.
   Rad Simarubæ.....3iij.

Misce.—Put into a pint of boiling water and let stand for three hours—a small teacupful every morning, noon and night.

R

4. Solut. Sodæ Chlorinatæ.....℥iiij.
   Aquæ Destill.....O. iij.
   Spirit. Lavand. Comp.....℥iss.

Misce.—This last mixture to be poured into the water of a bath; this bath to be used every day, at any time considered convenient by the medical attendant.

Immediately after bathing, the patient is to be wrapped up in warm blankets, with the object of exciting a speedy reaction.

According to Dr. Delfeau's statements, the above treatment has never failed, but in a trifling number of desperate cases, in affording speedy relief and cure.

He hopes that his brethren of America will meet with the same satisfactory results, if they judge it expedient to give his treatment a trial.

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ON RESPIRATION.

By Prof. H. Dussauce.

Every one is acquainted with the absolute necessity of the act of respiration, and it does not require a medical knowledge to know that the lungs constitute the organ by which that important function is executed by man and animals with warm blood. There are two acts of respiration, viz: to inspire a certain quantity of air, which enters in the lungs, and afterwards to expel it; these two operations are effected with the help of alternative movements, the action of which is continued; so soon as they shall cease, even during the shortest time, the animal will perish.

Respiration can not be performed in a place deprived of air; even, it will stop if the quantity of air be too limited, or if that fluid be too rarified. The proof is demonstrated by placing an animal in full life under the receiver of a *pneumatic machine;* as soon as a part of the air of the receiver is exhausted, the animal grows weaker, loses his strength, makes frequent aspirations, and very soon dies.

Any gas, but the air, can be used in the act of respiration; pure oxygen though is too active, and the other fluids are poisonous, or suffocative; carbonic acid exemplifies the one and nitrogen the other; but in the air, oxygen alone is essential to life, for animals are soon suffocated when they breathe too long a time the same air, for the reason that the proportion of oxygen diminishes all the while without being renewed.

In consequence, it is necessary that the atmosphere be pure, and that the principles of the air do not experience any change in their proportions, to permit the vital functions to perform their normal office. Unhappily, this is not often the case; the impurity of the air is met principally in buildings in which certain metals are worked, in those in which organic matters are treated, in the neighborhood of sewers, etc., etc., because in these different localities, the air is saturated with peculiar gases, or pestilential vapors, which exercise disastrous effects on persons obliged to stay in them for a certain length of time.

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There is too much neglect of the means of diminishing the bad effects of our air vitiated with deleterious principles, and to restore to it its primitive purity. In the construction of our houses, workshops, hospitals, theatres, churches, etc., we generally never take notice of the indispensable conditions for a thorough purification of the air. We think it useful, therefore, to make known the principles which ought to guide us in these circumstances.

Lavoisier and Seguin estimated the quantity of oxygen consumed by one man in twenty-four hours to be 755 cubic decimeters or litres; this result agrees with that Lavoisier obtained in his last experiments, before his execution, the 8th of May, 1794.

Other chemists carried the number to 850 litres of absorbed oxygen, consequently, since oxygen forms the 0.21 of the atmosphere, it follows that one man destroys in one day, or renders unable to entertain the combustion and respiration, nearly five cubic metres of atmospheric air. But it has been ascertained that this fluid becomes suffocative when it contains about 10 per cent. of carbonic acid, and even it is dangerous to breathe it before it has obtained that degree of impurity. We can, without exaggeration, carry to 25 cubic metres the quantity of air one man renders unhealthy in the space of twenty-four hours.

But to the prejudicial influence of respiration on the air, we must add that due to some other causes, such as our lights, etc. Experiment has taught us that one candle, (6 to 1 pound), by example, requires for its combustion 68 grammes of oxygen per hour, which represent 340 cubic decimeters of air; a stearic acid candle requires 86 grammes of oxygen, or 485 cubic decimeters of air; a good lamp oil, 336 grammes, or 1680 cubic decimeters of air.

If we also keep an account of the air necessary for the combustion of the materials used for fuel, we see how great must be the renewing of the air in the case where a single person, a single light, and one fire are in the same room. But if several persons and many lights are together in the same apartment,

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the multiplicity of causes of the deterioration of the air increases the necessity of ventilation.

Observation has made known that not to be inconvenienced during the act of respiration, it requires at least from 6 to 10 cubic metres of air per hour for every individual. According to that rule, that a single person may not feel indisposed in a room well closed, in which he is to remain twenty-four hours, it is requisite that the room should contain from 144 to 240 cubic metres of air. In order that the atmosphere in any apartment may continually be in its normal state, the introduction and exit of that air must be regulated in the proportion of 100 litres per minute for every person living in the apartment.

The following facts demonstrate the importance of a good ventilation: In the hospital of the Maternity, Dublin, there died in four years 2944 children, to 7650 (33.48 per cent.), during the first three weeks of their birth. It was thought that such a fearful mortality was due to the want of pure air in the rooms, consequently, the means of ventilation were improved and the mortality was reduced to 279; (3.64 per cent.) It is apparent from this fact that out of the 2944 children who died in the four preceding years, 2655 perished for the want of air.

Thus, it is indispensable to have in all our habitations, and principally in places where many meet, a good system of ventilation, by which we only mean the establishment of a convenient apparatus whereby the noxious elements may be constantly replaced by pure air. Nothing is more simple; it is sufficient to heat the vitiated air by forcing it to pass through a tube heated directly by a lamp, or by the neighborhood of a chimney used for some other purposes. The air becoming lighter, as fast as its temperature raises, escapes by the passage which conducts it out of the room, and determines an afflux of cold air by all the openings which exist in the rooms. That disposition is called an *appel system.*

The enormous quantity of oxygen which is all the time absorbed from the atmosphere, by the respiration of living beings, might cause some fear that a day will come when this fluid would be exhausted, but calculation shows, that even by

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exaggerating the deterioration, it would require not less than 800,000 years for all animals living at the surface of the globe, to make the oxygen disappear entirely, consequently, if we suppose the analysis of the air made in 1800, and that during all the century the plants had stopped to function, all the animals continuing to live, the analysists in 1900 will find the oxygen of the air diminished only of $\frac{1}{8000}$ of its weight, a quantity unaccessible to our most delicate means of observation, and which would have no influence on the lives of organized bodies.

The oxygen of the air which is consumed by animals, is converted into water and carbonic acid, and is restored to the atmosphere by the plants which decompose these two bodies.

The air which surrounds us weighs as much as 581,000 cubes of copper, of a size of one kilometer, its oxygen weighs as much as 134,000 of those same cubes; supposing the earth to be inhabited by one thousand millions of men and an animal population equivalent to three millions of men, we shall find that the whole will consume in one century a weight of oxygen equal to 15 or 16 cubic kilometers of copper, while the air contains 134,000. It would require, therefore, 10,000 years for all those men and animals to produce on the air an effect sensible to the analysis, on the supposition, even, that the vegetable life be suspended.

The conditions indispensable for respiration being known, let us examine the manner in which air intervenes in that important act, and first we must well establish the essential object nature has prepared, by making that function the first cause of vitality.

When the blood, so ingeniously called by Borden *flowing meat*, on account of its play in the economy, has traveled through the arteries, and has thus carried life to all parts of the body, it comes back to the heart by the veins; during the journey its property and nature have been changed, from red it has become brown, and is no longer fit for assimilation; and it is only by experiencing new modifications in the lungs, by the influence of the air, that it comes back to the state of arterial blood and can be used anew for the nutrition of the organs.

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An examination of the alterations air experiences by the respiration of an animal, will enable us to appreciate the manner this fluid acts on the venous blood. It is what Priestley, Scheele, Lavoisier, and Laplace have told us. Before their day this subject had not been investigated. They ascertained, and their opinion has been confirmed since, that the *ejected air* contains more aqueous vapors, less oxygen, and more carbonic acid than the *breathed air*, lastly, that the volume of the *ejected air* is nearly equal to that of the *breathed air*. Lavoisier and Laplace, from these facts, deduced the conclusion that, as soon as the venous blood comes in contact with the air in the thousand little veins of the lungs, oxygen unites with a part of its carbon and hydrogen to form carbonic acid and water, which new products are soon ejected by the contraction of the lungs, and that venous blood thus deprived of a part of carbon and hydrogen, recovers all of the properties of arterial blood.

That theory is very simple, the essential phenomenon consists in a true combustion, and, as Lavoisier so justly says: "Respiration is nothing but a slow combustion, similar in the whole to that of a burning candle; and animals while breathing are real combustible bodies which burn and consume. In the respiration, as in the combustion, it is the air which furnishes the oxygen and the caloric, but as in the respiration, it is the substance of the animal, the blood, which furnishes the combustible; if animals were not repairing by the food what they lost by respiration, like a lamp, the oil would be missing and the animal life would be extinguished."

It has also been ascertained that besides water and carbonic acid, animals exhale, constantly, nitrogen, which element is introduced into the system in the food, and that nitrogen of the air does not take any part in the act of respiration and nutrition, that, consequently, air is never a food for man and animals, that it only furnishes its oxygen to burn the excess of carbon and hydrogen accumulated by the food in the venous blood.

One of the remarkable effects of the respiration on animals is the husbanding of that heat necessary for their existence, and which is generally superior to that of the "*element*" in which

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they live. John Davy, who made numerous experiments on the temperature of the bodies of different animals, has shown that birds have a temperature the most elevated, since it reaches 109°4 F.; the mammiferous occupy the second rank, then the amphibious and fishes; then the mollusques, crustacea and insects. The latter class have sensibly the temperature of the "*element*" in which they live, in the fishes it is only four degrees higher. That of man is about 98°6 F. in all climates.

This disengagement of heat in the bodies of animals is, everywhere, and in all circumstances, the consequence of the combustion of the carbon and hydrogen of the food, or of the blood, by the oxygen of the air. The most constant characteristic of animality resides in that inside combustion and in the development of carbonic acid, which is its consequence.

Some modern physiologists have announced that a part of the animal heat has another spring than the respiration; but the theory of Lavoisier and Laplace, which attributes to this act all the heat produced by animals, is yet the more probable opinion, and is the one adopted by the most distinguished men of our epoch.—*Journal of Materia Medica.*

TALL TREES IN AUSTRALIA.

It would appear that the famous "mammoth trees" of California are not only rivalled, but surpassed in height, in Victoria Colony, Australia. The principal facts which warrant this conclusion, are collected by Dr. Ferdinand Muller, Director of the State Garden at Melbourne, in his interesting pamphlet, recently issued, upon "Australian Vegetation, considered especially in its bearings upon the occupation of the Territory, and with a view of unfolding its resources,"—from which the subjoined extracts are derived:

"The marvelous height of some of the Australian, and especially Victorian trees, has become the subject of closer investigation, since of late, particularly through the miners' tracks, easier access has been afforded to the back-gullies of our mountain-sys-

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tem. Some astounding *data*, supported by *actual* measurements, are now on record. The highest tree previously known was a *Karri-Eucalyptus* (*Eucalyptus colossea*), measured by Mr. Pemberton Walcott, in one of the delightful glens of the Warren river, of Western Australia, where it rises to approximately 400 feet high. Into the hollow trunk of this Karri, three riders, with additional pack-horse, could enter and turn in it without dismounting. On the desire of the writer of these pages, Mr. D. Boyle measured a fallen tree of *Eucalyptus amygdalina*, in the deep recesses of Dandenong, and obtained for it the length of 420 feet, with proportions of width, indicated in a design of a monumental structure placed in the exhibition; while Mr. G. Klein took the measurement of a eucalyptus on the Black Spur, ten miles distant from Healsville, 480 feet high! Mr. E. B. Hayne obtained, at Dandenong, as measurements of height of a tree of *Eucalyptus amygdalina:* Length of stem from the base to the first branch, 295 feet; diameter of the stem at the first branch, 4 feet; length of stem from first branch to where its top portion was broken off, 90 feet; diameter of the stem where broken off, 3 feet; total length of stem up to place of fracture, 365 feet; girth of stem three feet from the surface, 41 feet. A still thicker tree measured, three feet from the base, 53 feet in circumference. Mr. George W. Robinson ascertained, in the back-ranges of Berwick, the circumference of a tree of *Eucalyptus amygdalina* to be 81 feet at a distance of four feet from the ground, and supposes this eucalypt, towards the sources of the Yarra and Latrobe rivers, to attain a height of half a thousand feet. The same gentleman found *Fagus Cunninghami* to gain a height of 200 feet, and a circumference of 23 feet.

"It is not at all likely that, in these isolated inquiries, chance has led to the really highest trees, which the most secluded and the least accessible spots may still conceal. It seems, however, almost beyond dispute, that the trees of Australia rival in length, though evidently not in thickness, even the renowned forest giants of California, *Sequoia Wellingtonia*, the highest of which, as far as the writer is aware, rise, in their favorite haunts at the Sierra Nevada, to about 450 feet. Still, one of the mammoth

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trees measured, it is said, at an estimated height of 300 feet, 18 eighteen feet in diameter! Thus to Victorian trees, for elevation, the palm must, apparently, be conceded. A standard of comparison we possess in the spire of the Munster of Strasburg, the highest of any cathedral of the globe, which sends its lofty pinnacle to the height of 466 feet, or in the great pyramid of Cheops, 480 feet high, which, if raised in our ranges, would be overshadowed, probably, by Eucalyptus trees.

"The enormous height attained by not isolated, but vast masses of our timber trees, in the rich diluvial deposits of sheltered depressions within Victorian ranges, finds its principal explanation, perhaps, in the circumstance, that the richness of the soil is combined with a humid geniality of the climate, never sinking to the colder temperature of Tasmania, nor rising to a warmth less favorable to the strong development of these trees in New South Wales, nor ever reduced to that comparative dryness of air which, even to some extent in the mountain ravines of South Australia, is experienced. The absence of living gigantic forms of animal life amidst these, the hugest forms of the vegetable world, is all the more striking.

"Statistics of actual measurement of trees, compiled in various parts of the globe, would be replete with deep interest, not merely to science, but disclose, also, in copious instances, magnitudes of resources but little understood up to the present day. Not merely, however, in their stupendous altitude, but also in their celerity of growth, we have, in all probability, to accede to Australian trees the prize. Extensive comparisons, instituted in the Botanic Gardens of this metropolis, prove several species of Eucalyptus, more particularly *Eucalyptus globulus* and *Eucalyptus obliqua*, as well as certain Acacias—for instance, *Acacia decurrens*, or *Acacia mollissima*—far excelling, in their ratio of development, any extra-Australian trees, even on dry and exposed spots, such into which spontaneously our blue gum-trees would not penetrate. This marvelous quickness of growth, combined with a perfect fitness to resist drought, has rendered many of our trees famed abroad, especially so in countries where the supply of fuel or of hard woods is not readily attainable, or

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where for raising shelter, like around the cinchona-plantations of India, the early and copious command of tall vegetation is of imperative importance. To us here this ought to be a subject of manifold significance. I scarcely need refer to the fact, that, for numerous unemployed persons, the gathering of Eucalyptus seeds, of which a pound weight suffices to raise many thousand trees, might be a source of lucrative and extensive employment; but on this I wish to dwell, that in Australian vegetation we probably possess the means of obliterating the rainless zones of the globe, to spread at last woods over our deserts, and thereby to mitigate the distressing drought, and to annihilate, perhaps, even that occasionally excessive dry heat evolved by the sun's rays from the naked ground throughout extensive regions of the interior, and wafted with the current of air to the east and south, miseries from which the prevalence of sea breezes renders the more littoral tracts of West and North Australia almost free. But in the economy of nature the trees, beyond affording shade and shelter, and retaining humidity to the soil, serve other great purposes. Trees, ever active in sending their roots to the depth, draw unceasingly from below the surface-strata, those mineral elements of vegetable nutrition on which the life of plants absolutely depends, and which, with every dropping leaf, is left as a storage of aliment for the subsequent vegetation. How much lasting good could not be effected, then, by mere scattering of seeds of our drought-resisting acacias and eucalypts and casuarinas, at the termination of the hot season, along any water course, or even along the crevices of rocks, or over bare sands or hard clays, after refreshing showers? Even the rugged escarpments of the desolate ranges of Tunis, Algiers and Morocco, might become wooded: even the Sahara itself, if it could not be conquered and rendered habitable, might have the extent of its oases vastly augmented; fertility might be secured again to the Holy Land, and rain to the Asiatic plateau, or the desert of Atacama, or timber and fuel be furnished to Natal and La Plata. An experiment, instituted on a bare ridge near our metropolis, demonstrates what may be done."

A systematic catalogue of the known trees of Australia, with

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indications of their territorial distribution, occupies 18 pages of this essay; from which it appears, that in Australia, no less than 950 woody plants attain a height of at least 30 feet, or thereabouts.—*Silliman's Journal.*

ON SOME OF THE EFFECTS OF BROMIDE OF POTASSIUM.

By William Otis Johnson, M. D.

Some time during the past summer I casually stated that there had recently occurred, in several instances in my practice, some unusual symptoms immediately following the administration of medium doses of bromide of potassium. Up to that time no similar observation had found its way into print; but the November number of the *Edinburgh Medical Journal* mentions an instance of temporary paralysis, and alludes to analogous symptoms from this medicine, as reported in the *Comptes Rendus* and *Centralblatt.* Meantime, in October last, I observed a fourth case and herewith report them all.

Case I.—Female, single, æt. 59. Hysteria and asomnia. Had frequently taken bromide of potassium in moderate doses (eight to ten grains) with satisfactory results; had gone through with the eruption. Kept a solution on hand to use *pro re nata*, herself the judge as to occasion and quantity. Reported to me one morning that on the evening before, after two or three repetitions of the above dose (under thirty grains in all), she had felt a strange sensation of sinking, tremor and anxiety, with numbness in legs and forearms, lasting a few minutes and passing off gradually; no further effects and no recurrence of these.

Case II.—Male, æt. 28. Delirium tremens (epileptoid). All stimulus had been omitted for twelve hours and the bromide substituted, one drachm in solution, of which one-fourth was ordered every hour; the four doses were given and were succeeded by quiet and repose of body and mind. At night asomnia, restlessness and wandering returned. Thirty grains were given in one dose. Within five minutes there were increased agitation, tremors, anxiety, hysterical dyspnœa, numbness in limbs,

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loss of power in forearms, and a general subjective sense of immobility. Cessation of symptoms after a few minutes and a comparatively quiet night.

CASE III.—Female, æt. 49. Widowed twelve years. Irritable and swollen os uteri from over-cauterization, with the whole list of reflex or peripheral spinal symptoms. Had been taking for some time fifteen grains of bromide of potassium at night, and more when necessary; effects always good. Took it regularly and had the eruption. One night, quite late, I was sent for, to hear the report that after taking the bromide in somewhat larger dose than usual, between ten and eleven o'clock, she had been seized with vertigo (to which she was normally subject, however), great agitation, trembling, numbness up and down the spinal column, and other indescribable sensations in back, loss of power in forearms, and a general apprehension of impending dissolution. None of these symptoms, however, awaited my arrival, and although they were reported the next morning as having continued during the night, the result of close questioning did not sustain her impression to that effect, and I was satisfied that they had neither continued nor recurred.

CASE IV.—Male, æt. 40. Depression, asomnia, incertitude, irritability, insequence of thought. Had never taken bromide of potassium nor used any narcotic or sedative. First dose at 8 P. M., fifteen grains; no result. Second at 9 P. M., thirty grains. A few minutes afterwards the patient sprang up in bed, apparently frightened, agitated, trembling; said that his legs were immovable and his arms numb. A person in attendance fancied that a convulsion was at hand and started for wine. Before it was ready, the symptoms had begun to subside; the stimulus was taken, however, and a quiet night, without sleep, followed. The patient was afraid to try the bromide again, but there was no further occasion for it in the case.

Now to these facts, I add:

1. That they are the only instances in an employment of this drug extending over a period of six years, and to not less than a hundred cases.

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2. That the symptoms in other instances have *not* followed very much larger doses.

3. That they never returned after once subsiding; nor was the remedy suspended in consequence of them, nor did they ever repeat themselves in the same individual.

4. That the phenomena reported attach to but a single point in observation, and are in too direct and apparently causative relation with that point to admit the suggestion of accident or coincidence.

5. And, finally, that they constitute, as here detailed, the only observation on this point as yet placed on permanent record.—*Boston Medical and Surgical Journal.*

Comparative Safety of Ether and Chloroform.—Some discussion having arisen, a while ago, concerning deaths after etherization, the Medical Society of Lyons, the only city in Europe in which etherization is exclusively resorted to in preference to chloroform, appointed a committee to examine into the question. The following conclusions were arrived at:

1. That since 1847, only seven duly authenticated and detailed cases of death can be reasonably attributed to the use of ether.

2. All these cases cannot be laid in the same degree to the charge of this agent.

3. Three of them, relating to patients the subjects of great traumatic injuries, are especially questionable.

4. Of the seven cases, five relate to patients severely attacked (*profondement atteints*), and the two others were patients in special conditions—pregnancy in the one, and hystero-neuropathy in the other.

5. In none of these cases was the death so sudden as it often is from chloroform.

6. Ether may indeed cause death, but it is far less dangerous than chloroform.—*Gazette Medicale de Lyon.*

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THE PREPARATION OF PEPSIN.

The following method of preparing pepsin was published by Dr. Beale in his "Archives of Medicine:" "The mucous membrane of a perfectly fresh pig's stomach is carefully dissected from the muscular coat and placed on a flat board. It is then cleaned with a sponge and a little water, and much of the mucus, remains of food, etc., carefully removed. With the back of a knife, or with an ivory paper knife, the surface is scraped very hard, in order to press the glands and squeeze out their contents. The viscid mucus thus obtained contains the pure gastric juice, with much epithelium from the glands and surface of the mucous membrane. It is spread out upon a piece of glass, so as to form a very thin layer, which is dried at a temperature of 100° over hot water, or *in vacuo*, over sulphuric acid. When dry it is scraped from the glass, powdered and kept in a stoppered bottle. A good digestive fluid may be made as follows: Of the powder 5 grains; strong hydrochloric acid 18 drops; water 6 ounces. The fluid may be filtered easily, and forms a perfectly clear solution, very convenient for experiment. It may be taken with the salt at a meal. The powder is devoid of smell, and has only a slightly salt taste. This powder undergoes no change if kept perfectly dry. It contains the active principle of the gastric juice almost unaltered. Eight-tenths of a grain of this pepsin, with ten drops of dilute hydrochloric acid, and an ounce of distilled water, dissolve one hundred grains of hard boiled white of egg in from twelve to twenty-four hours."—*Medical Times and Gazette.*

NITROUS OXIDE AS AN ANÆSTHETIC IN SURGERY.—In the first number of the *Continental Gazette*, the new American newspaper just started in Paris, we find an account of the removal of a cancerous breast, by Dr. Marion Sims, in which nitrous oxide was used as the anæsthetic with entire success. The patient was sixty years of age, rather stout, and of lymphatic temperament. Anæsthesia was produced in two minutes and was kept

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up for sixteen minutes longer. In less than one minute after inhalation ceased consciousness was complete. There was no nausea or vomiting. The account states that—

"After the patient was first made insensible, she was allowed to breathe some air with the gas, and was thus *returned to semi-consciousness,* and continued in this condition during the entire operation. She declared, after the operation, that while inhaling the gas she could see Dr. Colton and Dr. Evans (who administered it), but felt no pain, though she experienced a kind of 'pushing sensation.'

"There were present to witness the operation Baron Larrey, Surgeon-in-chief to the Army; Sir Joseph Oliffe, physician to the British Embassy; Dr. Pratt; Dr. Vanzandt; Dr. Pope, of St. Louis; Dr. Stearns, of Boston, U. S., and some others of note, all of whom united with Dr. Sims in expression of surprise and delight at the operations of this new anæsthetic agent. This was, perhaps, one of the operations where the patient was kept insensible for the greatest length of time with the gas, and it certainly proved eminently successful."—*Boston Medical and Surgical Journal.*

PRE-HISTORIC MAN IN GREAT BRITAIN.

In an interesting communication to a Scientific Congress in France, quite recently, the author shows that man lived in Great Britain in association with the fossil hyena, cave bear, lion, tiger, Irish elk, reindeer, bison, hippopotamus, horse, rhinoceros, mammoth and other animals. The evidence of this consists in finding bones of these animals in caves and river deposits, associated with human bones and implements, under circumstances entirely precluding the possibility of subsequent interpolation of the latter; the animal remains, in many instances, charred and split, evidently by the agency of man, and bearing frequent traces of his rude tools. Of the various species enumerated, the mammoth, the horse and the bison were most abundant; the rapacious animals comparatively rare, and man himself not numerous. At that time Great Britain was united to the Continent of Europe, and the Thames flowed northward and united

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with the Rhine and the Elbe in forming an estuary. The climate was very severe, glaciers abounding in the mountains, and reindeer and musk oxen feeding in the plains. Next the land became depressed, the lowlands were submerged beneath the waters, and the climate of all Europe became warmer. The reindeer and the moose (called elk in Europe) moved northward, and the musk ox became known only as a living species in Arctic America.

Charcoal as a Hæmostatic.—In a communication to the Berks Co. Med. Soc., Dr. W. Murray Weidman, of Reading, offers the following of interest: "Charcoal (pulverized) has been recommended by all writers for the arrest of epistaxis. But sometimes, especially in the country, remedies cannot be obtained. But in every house a cork, a teacup, a stick, and a fire can be found. The cork is quickly charred by the fire, easily pulverized in the cup by the stick (a mortar and pestle), and thus one of the most efficient remedies is speedily prepared. A few weeks ago I was called to see a lad of 17, who had already lost twelve ounces of blood, and was still bleeding profusely from the right nostril. I used pressure, both internally and externally, with no avail. I made a cone three inches long of prepared lint, saturated it with liq. ferri sub-sulph., and pushed it up the nostril as far as possible. This arrested the hemorrhage for forty-eight hours, when oozing commenced, and sufficient blood was swallowed to produce nausea and vomiting. I was summoned to his bedside, and finding the blood again flowing, resolved to try the charcoal before resorting to the posterior plug. I had the 'cork charcoal' prepared, and directed it to be snuffed up, and by means of a quill blown into the nostril. The result was very gratifying. Four repetitions had the desired effect. The hemorrhage was stopped, and what was equally gratifying, no pain or distress was experienced, as when the anterior or posterior plug is used. The arrest was so speedy and effectual, and the remedy so simple, that I feel warranted in recommending it to the profession in general."—*Ex. from Trans. of Medical Society of Pennsylvania.*

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ALUM CRYSTALLIZATIONS OVER FRESH FLOWERS.

Make baskets of pliable copper wire, and wrap them with gauze. Into these tie to the bottom violets, ferns, geranium leaves, chrysanthemums—in fact, any flowers except full-blown roses—and sink them in a solution of alum of one pound to the gallon of water, after the solution has cooled, as the colors will then be preserved in their original beauty, and the crystallized alum will hold faster than when from a hot solution. When you have a light covering of distinct crystals that cover completely the articles, remove carefully, and allow them to drain for twelve hours. These baskets make a beautiful parlor ornament, and for a long time preserve the freshness of the flowers.—*Am. Jour. Pharmacy.*

INCOMPATIBILITY OF POT. IODID. AND POTASS CHLORAT.

This is an important point in practice, for in Syphilis, to act at the same time upon the ulceration of the mouth and the general malady, chlora. potass. and pot. iodid. are frequently given. This practice is dangerous, as has been demonstrated by M. Vee; for the chlorate of potash, absorbed simultaneously with the iodide of potassium, may part with its oxygen, and transform it into the iodate, a poisonous agent. The recent experience of M. Melsens proves the possibility of this transformation.

This ought to suffice to prevent, were it only as a precautionary measure, the simultaneous administration of the chlorate of potash and the iodide of potassium.—*Gazette Medicale.*

Glycerin Solutions.—For the benefit of those who prefer using glycerin rather than alcohol as a solvent for many agents, we append a few articles with their solubility in glycerin. Sulphur requires 2000 parts of glycerin; iodine, 100 parts; red iodide of mercury, 840 parts; corrosive sublimate, 14 parts; sulphate of quinia, 48 parts; tannin, 6 parts; muriate of morphia, 19 parts; tartar emetic, 30 parts; veratrine, 96 parts; atropia, 50 parts; iodide of sulphur, 60 parts; iodide of potassium, 3 parts; sulphuret of potassium, 10 parts. These solutions are called *glyceroles.—Jour. Appl. Chemistry.*

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THE SULPHUR PRODUCE OF ITALY.

The sulphur mines of Italy have long been famous for their yield, and their present productiveness fully sustains their reputation. They are now producing something like 300,000 tons per annum, which, taken in the crude state, represents a money value of about £1,200,000. But this yield has only become so enormous in the course of years, the average yield for the year 1830 being but one-tenth of the present yield. The greater part of the above quantity is derived from Sicily; the Romagna, however, commenced to increase the supply some seven years since, and in 1862 was contributing about 8,000 tons per annum, and this quantity has since been increased. For the last fourteen years an improved method of separating the sulphur from the accompanying limestone has been successfully practiced in Sicily. The separation of the sulphur from gangue is always effected by liquation, the necessary heat for the fusion being obtained by burning a portion of the ore. This operation, which was formerly effected in small cylindrical open kilns, is, by the improved process, performed in heaps, which are often four hundred times the capacity of the kilns. The ore is arranged in a manner similar to that adopted in charcoal burning, the air being excluded by an impermeable covering of earth. The loss occasioned by the formation of sulphurous acid has been greatly reduced by the new process. The production is increased by one-fifth, and the new heaps can be placed in the vicinity of houses and gardens without objection. Under the old system it was necessary to keep the heaps several miles away from dwellings and vegetation. The further advantage of the process is that the heaps may be fired at any time, instead of large masses of ore being kept in reserve for ignition at a particular season of the year. Beyond this, the process, which formerly was one of the most deadly nature, has been converted into one almost free from danger to the workmen.

A large portion of the island of Sicily is occupied by the gypsum and sulphur bearing formation, which extends from Mount Ætna to the neighborhood of Trapani. The rate of productiveness diminishes towards Trapani, Caltanisetta and Girgenti

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ing the best mines, Catania and Palermo those next in importance, whilst the least yielding are in the province of Trapani. In Sicily, as well as in the Romagna, the gypsum formation includes limestones, clays which are more or less marley, and beds of gypsum. In the latter rock, as well as in the limestones, the sulphur is found as an uniform or irregular mixture, sometimes concentrated in small parallel seams, and occasionally crystallized. In the latter case it is often associated with sulphate of strontia or celestine. The sulphur occurs in a different manner in the clays und slates, being found concentrated in globular masses. This method of occurrence is also common to all the sulphur mines of the Continent which are contained in argillaceous strata. Only a portion of the sulphur obtained is refined on the island, the greater part being exported in the crude state. For commercial purposes it is classified into three general qualities, which are further divided into seven subclasses. There are but fifty mines at present at work in Sicily, and the number of hands employed is over twenty thousand.

The Romagna Sulphur Mining Company possesses eight mines, five of which are in the province of Forli, Romagna, whilst three are at Monte Feltre, in the province of Urbino and Pessaro, in the Marches. The refined produce is exported chiefly from Rimini, where the refining works are situated, to the principal centres of consumption among the large towns of Italy. Refined sulphur is used in various manufactories for making sulphuric acid, and for several years past a new use has been found for it in the sulphuration of vines. In the course of scientific progress the general process, to which we have already alluded, has been improved in many minor details. But, beyond this, an entirely new process is just reported to have been introduced by M. Brunfaut, a Belgian. The average composition of the sulphur stone of Romagna is, for every 100 parts, 30.60 of sulphur, 26.80 of lime, 41.20 of alumiba and sillica, and 1.40 of water. By the ordinary method of extraction, only 10 of the 30 parts of sulphur are obtained; there is, therefore, a loss of upwards of 20 per cent., which, of course, must influence not only the profits, but also the price of the article. These defects in

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the system appear to have been completely obviated by M. Brunfaut, who is said to have obtained a yield of 25 per cent. instead of 10.

As already observed, the sulphur is contained only in a state of mixture in the Romagna stone, and not being in chemical combination with any substance, is easily separated by fusion. The melting point of sulphur being extremely low, fusion may be effected by hot air or by steam, instead of in kilns or even heaps, where the excess of heat converts a large portion of the substance into sulphurous acid. Taking advantage of this property of sulphur, M. Brunfaut employs an apparatus which consists of a horizontal cylinder containing an archimidean screw throughout its whole length. The cylinder is made to revolve more or less slowly, according to the nature of the mineral to be treated. The sulphur ore is poured in through a funnel at one end of the cylinder, and when it has sufficiently undergone the action of the apparatus it is led out at the other end. The temperature in the cylinder is maintained by hot air or steam, which is introduced under a pressure of three atmospheres. By this machine 150 cubic metres of the mineral are reported to be disposed of in twenty-four hours. This economical method of extracting sulphur from its minerals is a matter of great importance to Italy, which is so rich in that valuable substance.—*Jour. Franklin Institute, and American Jour. Pharmacy.*

Mortality after Amputation of the Thigh.—M. Hussan, in publishing the statistics of the hospitals of Paris, embracing the returns of 100,000 patients, gives the following results of amputation of the thigh: In 1861, 42 amputations, and only 7 recoveries; a mortality of 83.33 per cent. In 1862, 40 amputations, and 19 recoveries; a mortality of 52.50 per cent. In 1863, 40 amputations, and 15 recoveries; a mortality of 62.50 per cent. Average mortality for three years, 66.11 per cent., or 41 recoveries in 122 operations.

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BLANCHING OF THE HAIR.

A paper read before the Royal Society, London, by Mr. Erasmus Wilson, has thrown new light on the question as to what causes the sudden whitening of the hair, often produced by fright or profound grief. He cites a case in which the hair was colored white and brown alternately from end to end. The white segments were about one-half the length of the brown, and the two together measured about one-third of a line. Under the microscope the colors were reversed, and it was obvious that the opacity of the white portion was due to a vast accumulation of air globules packed closely together in the fibrous structure of the hair, as the medulla. There was no absence of pigment, but the accumulation of air globules veiled and obscured the normal color and structure. Mr. Wilson suggested the possibility of the brown portion being the day growth, and the white portion the night growth. He also said, in reference to the sudden blanching of the whole hair, of which there were many cases on record, that during the prevalence of a violent nervous shock the normal fluids of the hair might be drawn inward toward the body. in unison with the generally contracted and collapsed state of the surface, and that the vacuities left by this process of exhaustion might be suddenly filled with atmospheric air. An interesting discussion followed the reading of the paper. Dr. Sharkey alluded to a recent case of sudden blanching of the hair reported by Dr. Landois, of Griefswald, in Virchow's Archiv, which was ascertained to be the result of an accumulation of air globules in the fibrous substance of the hair. —*Exchange.*

To Prevent Metals from Rusting.—Dip the article into very dilute nitric acid, and afterward immerse it in linseed oil, allowing the superfluous portions to drain off. When the coating of oil is thoroughly dry, the article will be ready for use, and thus protected will remain bright for years.—*Journal of Applied Chemistry.*

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THE MEDICAL REPORTER.

ST. LOUIS, FEBRUARY 15, 1868.

REVIEWS.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION. Fifteenth Annual Meeting. Held at New York City, September, 1867.

It is impossible to peruse this work without the conviction of the immense aid which pharmacy has rendered to medicine. Very few physicians are aware of the vast amount of information which is contained in these proceedings, necessary for the successful practice of medicine. Why do not physicians study more attentively pharmacy? Very few are accomplished therapeutists; we specialize every other branch of our profession, but rest satisfied with a most superficial knowledge of a few agents we employ to combat disease. We wish that these proceedings were generally circulated in the medical profession; they are not intended solely for the apothecary; we are convinced that a perusal of these yearly productions would afford infinite satisfaction to the physician. The present work abounds in very able reports and essays on various subjects connected with pharmacy, not at all irrelevant to the course of study of the medical practitioner. The work can always be obtained from Mr. John M. Maisch, permanent secretary, 1607 Ridge avenue, Philadelphia.

HALF-YEARLY COMPENDIUM OF MEDICAL SCIENCE. Edited by S. W. Butler, M. D., and D. G. Brinton, M. D. Part I. January, 1868.

This is a new enterprise, undertaken for the purpose of bringing before the profession an abstract of all the journals, home and foreign, in every department of medical literature. It is very neatly gotten up and contains all that is valuable in the writings of the day. We are under obligations to the editors for a copy, as also for a very handsome "Visiting List," published by Dr. Butler. This "Pocket Record" is as convenient in point of size and contents as any we have seen. The *Half-Yearly Compendium* will supply the want long felt, and we wish it complete success.

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ON THE SIGNS AND DISEASES OF PREGNANCY. By THOMAS HAWKES TANNER, M. D., F. L. S. From the second and enlarged London Edition. With four colored plates and illustrations on wood. Philadelphia: Henry C. Lea. 1868.

The subject of the above work, however extensively and carefully elaborated in these late years by some of the best of medical minds, will still be found worthy of further investigation and will yet yield profitable results. The views of older writers upon the diseases of the uterus, impregnated or not, have been displaced by new ideas, the consequence of new experience; and as we are now probably on the point of rectifying those ideas by a more just appreciation of them, such as more knowledge alone can give, so is it proper by all means to gain as clear an insight into the whole subject as our own individual observation or that of others may afford.

Dr. Tanner certainly gives us in the above work a valuable compendium, enriched by his own labors, of all that is known on the signs and diseases of pregnancy. If there be much derived from others which has already been laid before us, much also belongs to him and should be placed to his credit.

We advise all to read it, if only for the purpose of refreshing old ideas or dissipating somewhat the confusion which is apt to gather about our thoughts from carelessness of observation.

Dr. Tanner is a pleasing writer, and the student will find the work attractive, as well in the style as in the illustration of his facts by numerously detailed cases.

Keith & Woods have it for sale.

A PRACTICAL TREATISE ON THE DISEASES OF CHILDREN. By D. FRANCIS CONDIE, M. D. Sixth edition, revised and enlarged. Philadelphia: Henry C. Lea, 1868.

No other treatise on this subject is better adapted to the American physician. Dr. Condie has long stood before his countrymen as one peculiarly pre-eminent in this department of medicine. His work has been so long a standard for practitioners and medical students that we do no more now than refer to the fact that it has reached its sixth edition. We are glad once more to refresh the impressions of our earlier days by wandering through its pages, and at the same time to be able to recommend it to the youngest members of the profession, as well as to those who have the older editions on their shelves.

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CHRONIC DISEASES OF THE LARYNX, WITH SPECIAL REFERENCE TO LARYNGOSCOPIC DIAGNOSIS AND LOCAL THERAPEUTICS. By Dr. ADELBERT TOBOLD, Lecturer in the University of Berlin. Translated from the German and edited by GEORGE M. BEARD, A. M., M. D. With an Introduction on the History and Art of Laryngoscopy, Rhinoscopy, Rhinitis, Inhalations and Electrization applied to Diseases of the Air Passages; and an Appendix by the Editor. Illustrated by forty-four engravings on wood. New York: William Wood & Co. 1868.

The title page sufficiently indicates the character of the work; probably we find in this as complete a disquisition on the entire subject as anywhere. The treatise of Dr. Tobold is well translated, though the editor's views and remarks are quite as prominent as the author's. If anything, we believe we should have preferred the author by himself. We do not complain, however, when so thorough an examination of the subject treated is presented.

The specialist in this branch of therapeutics will, no doubt, become familiar with the work, if only for the sake of Dr. Tobold, who has attained so much celebrity in his attention to the subject; the general practitioner will certainly desire information on so important a practical matter.

Keith & Woods have the book for sale.

The Philadelphia College of Pharmacy.—We are pleased to see it stated that this very useful and active association has taken measures to erect a new and more commodious hall for its accommodation.

A spacious lot of ground has been purchased, and it is the design of the college "to erect a building which, besides ample accommodations for the classes in attendance on the lectures, will contain suitable apartments for library and reading room, and for the museum, which has already outgrown the space provided for it; also an ample assembly room, in which the members of the college and strangers visiting the city may meet for consultation, and for social and professional intercourse. Impressed with the advantages of this kind of association in developing a taste for scientific and practical knowledge, in stimulating to improvement, and creating an honorable professional

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spirit among individuals of similar pursuits, we intend that the new hall shall be a centre of attraction for the druggists and pharmaceutists of the city—a place where specimens and newly-discovered processes and apparatus may be shown, and where occasional lectures of general interest may be given. By having a resident janitor on the premises, admission can be obtained at all hours, and the several apartments can always be kept in readiness for their appropriate uses.

"A leading design is the location in the new building of a practical laboratory, for experiment and instruction. The Alumni of the college have already subscribed several thousand dollars, part of which has been collected and invested at interest, for the establishment of such a laboratory, but it was appropriately postponed till more suitable apartments could be procured. The great utility of this proposed feature of our college can hardly be over-estimated; in the midst of this great city we need a practical school, conducted on a sufficiently comprehensive scale, where those branches of chemical science pertaining more especially to medicine and pharmacy can find ample development, where adulterations and sophistications can be detected and exposed, and where all can resort, on the payment of suitably regulated fees, to solve the problems continually arising in the course of their manufacturing pursuits."—*Medical News and Library.*

M. Berard, Professor of Chemistry at the Faculty of Medicine, on the completion of his fiftieth year of professorship, has received the Cross of Knight Commander of the Legion of Honor. M. Michel Levy, Professor of the Val de Grace, has been nominated Grand Officer of the Legion of Honor. M. Nélaton is the only member of the medical profession in France who enjoys this dignity. In Austria, Rokitansky has been promoted to the High Chamber, and in Italy the newly elected President of the Lower House, M. Lanza, is a medical man.

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Dr. Cros, in a paper read before the French Academy of Medicine, states: "Pulmonary phthisis never arises, never is developed in the human organism, unless this organism has presented for months or years most evident signs of organic disturbances, belonging to the order of changes which I have placed under the title of de-co-ordination; that which has been considered as the commencement of phthisis is only the consequence and the end of a disease already of long standing." (The author calls power of organic co-ordination every principle which maintains the existence of a living form, which has presided at its origin and regulates its predetermined evolution.) Thus, according to Dr. Cros, pulmonary phthisis never appears unless the organism has been for a long time affected by the form of de-co-ordination characterized by swelling of the spleen (splenic de-co-ordination); unless the free working of the respiratory organs has been long impeded by a total of material causes, the most important of which is abnormal elevation of the diaphragm caused generally by increased volume of the liver. To these anatomical changes the dyspnœa considered by all authors as one of the symptoms of the first degree of phthisis should be attributed.—*Archives Generales.*

Dr. *Guillan*, who was lately called in by Napoleon, declined any fee, saying that "the honor was sufficient for him." However, $2,000 were sent to him, but he made a present of the whole amount to the Academy of Medicine.—*Medical Record.*

The Society for the Prevention of Cruelty to Animals (London) has voted twenty-five pounds to the Richardson testimonial fund, in consideration of his discovery of the method of producing local anæsthesia.

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The Boston Medical and Surgical Journal has been enlarged and greatly improved. We congratulate the publisher on its elegant appearance. The editorial management is in the hands of Dr. David W. Cheever, as editor, and Dr. O. F. Wadsworth, as assistant editor. Dr. Cheever has long been known as an able and interesting medical writer. The *Journal* has been published since 1828, being one of the oldest, as it has been one of the ablest, published in the United States. We trust that the publishers will receive due encouragement for their enterprise, and to the editors we extend a warm fraternal greeting.

New Hospital.—The city of Rochester, New York, has a new hospital, which is evidently a credit to the country. It is complete in all its arrangements, as we judge from an account of it in "*The Hospital Review*, a journal devoted to the interests of the sick and suffering at the Rochester City Hospital." There is a surgical, medical, lying-in, and eye and ear department.—*Medical Record.*

The Cincinnati Medical Repertory.—This is the title of a new journal, edited by Dr. J. A. Thacker, the first number of which appeared in January last. It is to be published monthly, and to be devoted to medicine, psychology, surgery, and the collateral sciences. We extend a fraternal greeting to the editor and welcome him as an earnest laborer in the arena of medical literature.

Surgical Instruments from Pompeii.—M. Scoutettin has, by permission of the Italian Government, obtained photographic representations of the different surgical instruments found at Herculaneum and Pompeii. There are more than 300 of these instruments, but only about 60 of dissimilar kinds.

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